HAZARDOUS
SITE CONTROL
DIVISION

Remedial Planning/ Field Investigation Team (REM/FIT)

ZONE II

CONTRACT NO.
68-01-6692

CH2M HILL
Ecology &
Environment

FINAL WORK PLAN
SOUTH BAY
MULTI-SITE COOPERATIVE
AGREEMENT
SANTA CLARA COUNTY
CALIFORNIA

EPA WORK ASSIGNMENT
NO. 133.9K64.0

AUGUST 1985

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SOUTH BAY
MULTI-SITE COOPERATIVE
AGREEMENT
SANTA CLARA COUNTY
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AUGUST 1985

Engineers
Planners
Economists
Scientists

August 7, 1985

W69903.A0

Mr. Thomas Mix
U.S. EPA Region 9
215 Fremont Street
San Francisco, Ca 94105

Dear Mr. Mix:

Subject: Final Work Plan
South Bay Multi-Site Cooperative Agreement

CH2M HILL is pleased to submit the Final Work Plan for the South Bay Multi-Site Cooperative Agreement (MSCA).

Please call if you have any questions.

Sincerely,

Debbie Wallace

Debbie Wallace
Hydrogeologist

Mike DiFilippo SBC

Mike DiFilippo
Project Manager

jpf/SFR51/020

Attachment

DISTRIBUTION LIST

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Part I
SOUTH BAY OVERVIEW

STUDY AREA DESCRIPTION

The groundwater basins in the southern portion of the San Francisco Bay Area are alluvial systems made up of alternating clay layers and water bearing zones extending to depths of more than 500 feet, where bedrock is typically encountered. The geology is laterally heterogenous. Ancient stream beds have left gravel deposits that frequently bisect the clay aquitards and locally effect the pattern and velocity of groundwater flow. A portion of the Santa Clara County Basin, one of the groundwater basins in the southern San Francisco Bay Area, is herein termed the South Bay. The direction of groundwater flow in the South Bay is generally from the relatively unconfined recharge area in the south to the northern confined area where both water use and population are concentrated.

The South Bay is served by a complex water supply system. Nineteen major water purveyors and more than 200 small systems serve water to a population of nearly 1.5 million residents. Many of these systems draw their water from a groundwater resource which is augmented by an extensive network of artificial recharge facilities. The groundwater is blended, in varying proportions, with local and imported surface water. Overall, groundwater represents approximately 50 percent of the water supply.

Industry and population in the southern San Francisco Bay Area are generally concentrated in the flat northern areas adjacent to San Francisco Bay. Groundwater contamination has been found to exist beneath 91 South Bay industrial sites. The lateral and vertical extent of contamination has not been completely defined for most of these sites. It appears that the contamination is generally limited to water-bearing zones above the major confining layer in areas where such a layer exists. There is reason to believe, however, that the deeper aquifers will become contaminated if timely, effective, and coordinated actions are not completed at the known sites and at any other, presently undetected, contamination sites which may exist.

In the southern portion of the South Bay, where recharge of the deep aquifer occurs, several major public wells have been removed from service because of the presence of volatile organic compounds. In the northern portion of the South Bay, a larger number of wells have been contaminated. These wells are, however, mostly smaller private wells completed in the shallow zones above the confining clay layer.

SOUTH BAY HISTORY

In the fall of 1981, Fairchild Semiconductor Company in southern San Jose, California discovered a leak in an underground tank used to store trichloroethane (TCE). TCE is a solvent used throughout the electronics industry. It was determined by Fairchild and their consultants that several thousand gallons of TCE had escaped and contaminated the groundwater that was used for public water supply. The contamination resulted in the closing of a well serving approximately seven hundred people. During the following year, twenty one additional leaks were identified in the South Bay as other electronics firms, on their own initiative, instituted investigations to assess the integrity of their underground tanks.

In response to these groundwater contamination cases, the San Francisco Bay Regional Water Quality Control Board (RWQCB) directed its staff to initiate a program to determine the magnitude of the problem of leaking underground chemical storage and handling facilities in the sensitive groundwater basins of the San Francisco Bay Area.

In March of 1982, the RWQCB staff initiated a solvent storage tank Leak Detection Program (LDP). The program included elements for detection, correction, and prevention of accidental discharges of chemicals to the environment from underground facilities. These program elements have been implemented in a major cooperative effort involving the effected industries, local governments, and state regulatory agencies.

The intent of the detection element of the RWQCB's LDP was to identify all potential sources of chemical leaks that could effect usable groundwater. This element included developing and mailing a questionnaire to approximately two thousand companies to identify the location, characteristics, and history of underground chemical storage and handling facilities. Nearly 90 percent of the questionnaires were mailed to facilities in the South Bay. As a result, approximately 2,000 underground tanks were inventoried at more than 400 industrial sites in the San Francisco Bay Area.

Because of the potential threat to groundwater, facilities with underground solvent tanks were targeted for further investigation. These facilities were requested to immediately initiate a subsurface investigation including sampling and analysis of soil and groundwater beneath the tanks. Approximately 100 subsurface investigations were required in the San Francisco Bay Area. Most of these were in the South Bay. Of these 100, it was found that 75 sites had sufficient soil and/or groundwater contamination to require further investigation. The chemicals commonly detected were trichloroethane, trichloroethylene, tetrachloroethylene, dichlorethanes and dichloroethylenes, methylene chloride,

freons, and chlorinated benzenes. The contaminant concentrations measured at these sites ranged from less than one hundred parts per billion to several hundred parts per million, and in some cases, as high as several percent.

Since late 1981, the RWQCB staff have identified groundwater contamination at more than 100 industrial sites in the San Francisco Bay area. Ninety-one of these sites are located in the South Bay.

FEDERAL, STATE, AND LOCAL RESPONSE TO THE PROBLEM

RWQCB staff are currently requiring investigative and remedial cleanup activities at 91 South Bay sites. The staff are also screening new reports of contamination to determine whether those new sites require further investigation.

In order to prevent future groundwater contamination from industrial chemicals, local governments, in conjunction with industry and state regulatory agencies, have developed a model ordinance addressing the storage and handling of hazardous materials. This model ordinance includes construction guidelines for underground facilities as well as provisions for permitting and long-term monitoring of these facilities. An ordinance similar to the model ordinance has been adopted by most of the cities in Santa Clara County in the form of a Hazardous Materials Ordinance. The model ordinance has also served as a basis for similar legislation at the state level.

Implementation of the local Hazardous Materials Ordinances and state regulations are expected to result in monitoring and subsurface investigations at many of the underground chemical storage facilities identified but not investigated under the RWQCB's LDP. The degree to which these new sites and data are integrated into ongoing investigations in the South Bay, will have a significant effect on the success of overall groundwater protection in the South Bay.

In April, 1984 the RWQCB received Federal funding under Section 205j of the Clean Water Act to develop and implement a methodology to assess the potential for groundwater contamination at sites where hazardous materials had leaked to the environment from underground storage facilities. The methodology developed and the resultant South Bay site rankings have herein been termed 205j.

During April 1984, EPA provided funding, in the amount of $960,000, for an Integrated Environmental Management Project (IEMP) in Santa Clara Valley. The objective of work conducted by the IEMP is to identify and define risks to public health posed by exposure to toxic substances in the air, surface water, and groundwater; to assess the relative

severity of these risks; and, to develop approaches to effectively manage these risks.

On July 16, 1984, EPA launched an intensive effort to evaluate South Bay sites for National Priorities List (NPL) Update No. 2. Concurrently, EPA requested and obtained funding in the amount of $250,000 for forward planning activities in the South Bay. The purpose of these activities was to review existing information on the South Bay sites, identify information and data gaps, and develop work plans to remedy the gaps on a site, subregional, and regional basis.

On July 25, 1984, a number of regulatory agencies involved with the problem agreed to form the South Bay Groundwater Contamination Task Force (Task Force). The members on the Task Force are EPA Region 9, California Department of Health Services (DHS), RWQCB, Santa Clara County, the Santa Clara Valley Water District (SCVWD), and the City Managers Association. The primary objective of the Task Force is to facilitate the efforts of the government agencies in addressing the problem.

On October 2, 1984, 19 South Bay sites were proposed by EPA for addition to the NPL. Later in 1984, EPA allocated $1,000,000 for those preliminary RI/FS activities identified by EPA and the RWQCB as necessary to begin managing the South Bay groundwater contamination problem on a regional scale. The EPA has subsequently worked closely with involved state and local agencies to develop a strategy that will fully address the South Bay groundwater contamination problem. This strategy has been termed the South Bay Program and will be implemented through a Multi-Site Cooperative Agreement (MSCA) which will address the groundwater contamination problem in the South Bay.

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Part II
THE SOUTH BAY PROGRAM

The South Bay, for the purposes of the South Bay Program, is defined as the 205j study area modified slightly to include portions of East Palo Alto and Menlo Park. The 205j study area includes the Santa Clara Valley and Coyote groundwater subbasins. These subbasins are located within the northern portion of Santa Clara County (north of Cochran Road). Figure 1 presents the boundaries of the South Bay.

The complexity and extent of groundwater contamination within the South Bay dictates that a coordinated, multi-level remedial approach be taken. The South Bay Program was developed for this purpose.[1] In developing the South Bay Program, an effort was made to maximize the use of data and staff available through programs currently underway at the RWQCB, SCVWD, DHS, and other agencies.

An effort to use terminology recognizable to both the RWQCB and EPA was made in preparing the South Bay Program. Generally, RWQCB site investigations are similar to the EPA's remedial investigations (RI) where data are obtained to assess the extent and magnitude of contamination or to provide technical information for identification and comparison of remedial controls. RWQCB alternative evaluations are similar to EPA's feasibility studies (FS) where potential remedial controls are identified, developed, and compared to select cost-effective actions. Removal Actions (RA) are used by both the RWQCB and EPA to refer to those actions taken to protect public health or the environment prior to conducting a full-scale RI/FS (site investigation/alternative evaluation).

A Multi-Site Cooperative Agreement (MSCA) between the California State Water Resources Control Board (SWRCB) and EPA will be used to obtain Federal funding to augment certain state activities in the South Bay. On May 3, 1985 DHS delegated lead responsibility to the SWRCB for MSCA activities in the South Bay. MSCA activities will constitute the major agency efforts to be conducted in the South Bay. The MSCA activities are outlined below:

- o A combination of regulatory and review tasks at specific sites where potentially responsible parties (PRPs) are conducting investigations (Tier I),

[1] A preliminary draft of the program was issued for review and comment in January 1985.

- o Evaluation of the impacts remedial actions at one site have on another site or on the groundwater resource in general (Tier II),

- o Evaluation of optimal groundwater use and management strategies or protection policies in the entire region (Tier III).

RI/FS (site investigation/alternative evaluation) activities in the South Bay that are currently underway or those that will be implemented in the future will be conducted on three levels: the specific site level, the subregional level, and the regional level. These levels have been termed tiers.

The major elements of the South Bay Program are as follows:

- o Program Management
- o Site Management System
- o Enforcement
- o Community Involvement
- o Tier I Activities
- o Tier II Activities
- o Tier III Activities.

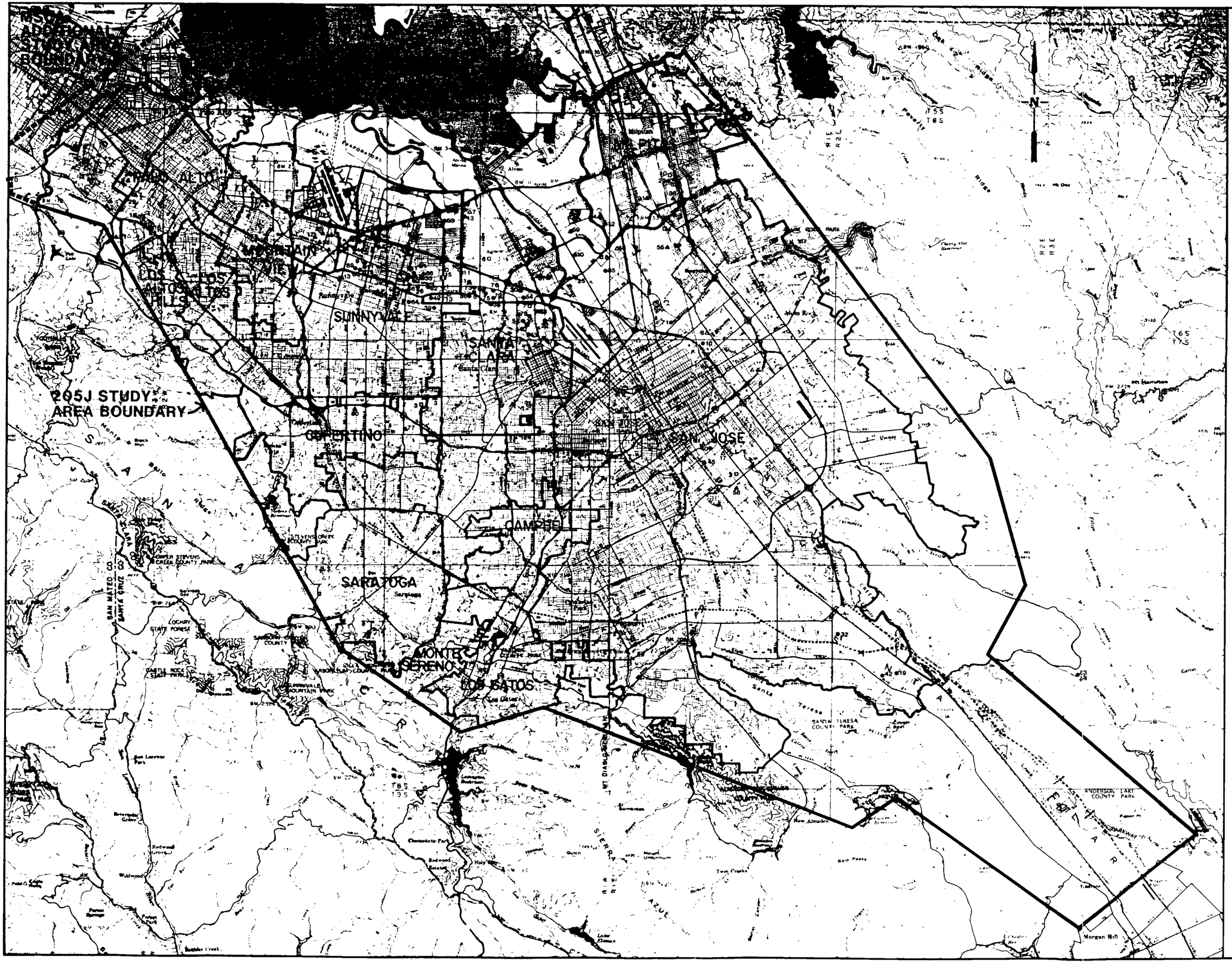
Within each of these program elements, specific tasks have been defined that will be performed as part of the MSCA. Each of the program elements and their respective MSCA tasks are discussed in Part III of this report.

Figure 2 presents the relative sequence of activities needed to ultimately implement planned, coordinated, and cost-effective solutions to the South Bay groundwater contamination problem.

As reflected in Figure 2, Tier I activities include RI (site investigations) and FS (alternative evaluations) conducted by PRPs (or lead governmental agencies), oversight and review of PRP activities by the agencies, and implementation of RAs as needed.

Tier II activities are those associated with subregions. Subregions exist throughout the South Bay because of the variety of factors including potential health risks associated with a multi-source plume and hydrogeologic connection of separate sites. Subregional activities consist primarily of identifying and rectifying gaps between specific site information and examining the impact of remedial actions at one site or another on the subregional groundwater resource.

Regional activities in the South Bay are included in Tier III. These activities include regional tasks such as well inventories and monitoring, sealing of potential conduits, and assessment of long-term extraction effects on the groundwater



LEGEND:

ONGOING INVESTIGATIONS

- ● 205J COMPLETED SITES
- ▲ 205J PLANNED SITES
- ■ NON-205J SITES

NO FURTHER ACTION NO CONTAMINATION SITES (DETERMINED BY 205J STUDY)

- △ NO FURTHER ACTION
- □ NO CONTAMINATION

APPROXIMATE SCALE (IN MILES)

0 1 2 3 4 5

FIGURE 1

SOUTH BAY SITE LOCATIONS

SOUTH BAY PROGRAM

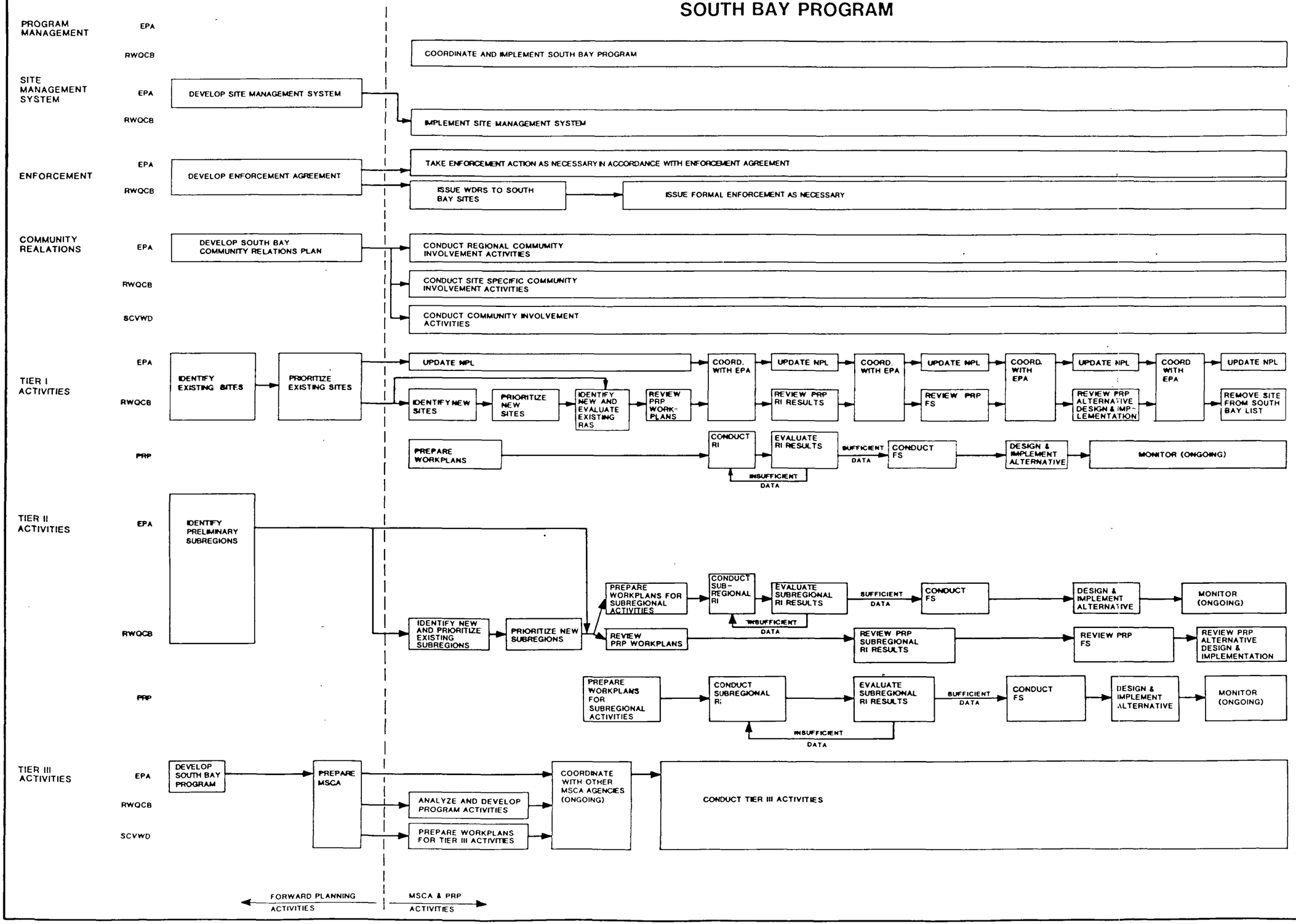


FIGURE 2

resource. Substantial overall program guidance for direction and consistency is crucial to help assure cleanup and minimal impact on resource management. Information obtained in Tier III may be particularly useful in assessing groundwater use and management alternatives.

A preliminary list of the contaminated sites in the South Bay is presented in Table II-1. The list is primarily a compilation of information resulting from a program that was conducted by the RWQCB staff during 1982, the Leak Detection Program (LDP), and a program currently underway at the RWQCB, the 205j Risk Assessment Program (205j). In addition to the sites identified by the LDP and 205j, the South Bay site list presented in Table II-1 also contains recently identified sites that are currently under investigation by staff in the Toxics Cleanup Division of RWQCB. Because 205j is an integral part of the current RWQCB staff's day-to-day operations, the 205j site list has been included in Appendix A. There are only minor differences between the site list developed for the South Bay Program and the 205j list.

As shown in Table II-1, a total of 126 sites in the South Bay have been divided into three groups based on the status of their RI (site investigation); ongoing, no further action, and no contamination. These groups were developed by the LDP, are currently used by the RWQCB staff, and are defined as follows:

- Ongoing: (91 Sites) — Contamination was found at the site in the initial investigation required by the LDP and further investigation is currently underway to define the extent of contamination and/or develop alternatives to clean up the site.

- No further action: (19 Sites) — Low levels of contamination were found at the site in the initial investigation required by the LDP. Further investigation is not, however, required by the RWQCB staff at this time.

- No Contamination: (16 Sites) — No contamination was found at the site in the initial investigation required by the LDP.

The preliminary list of sites presented in Table II-1 will be revised as additional information is reviewed. New sites may be added to the list and/or the categories in which the sites have been placed may change.

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Table II-1
Preliminary South Bay
Site List

Figure 1 Map Number[1]	Site	Site Address	City	Information Source	Comments
STATUS:	ONGOING				
1	AMD - Building 901	901 Thompson Pl.	Sunnyvale	A, B	2, 3
2	AMD - Building 915	915 DeGuine	Sunnyvale	A, B	2
3	AMI	3800 Homestead Road	Santa Clara	A	
4	Ampex	728 San Aleso	Sunnyvale	A, B	2
5	Applied Materials	3050 Bowers Avenue	Santa Clara	A, B	2, 3
6	Aventek	3175 Bowers Avenue	Santa Clara	A, B	2
7	Aydin Energy Division	3180 Hanover Street	Palo Alto	A, B	
8	Becton, Dickinson, and Co.	13400 Winchester Blvd.	Los Gatos	A, B	
9	Circo	940 Hamlin Court	Sunnyvale	A	2
10	DAP, Inc.	530 Marburg Way	San Jose	A, B	2
11	Data General Corp.	433 N. Mathilda	Sunnyvale	A, B	2
12	Dura Bond	3201 Ash Street	Palo Alto	B	
13	Dysan Corp.	5200 Patrick Henry Dr.	Santa Clara	A, B	
14	Dysan Corp.	5440 Patrick Henry Dr.	Santa Clara	A, B	
15	EFAB, Inc.	1075 Richard Avenue	Santa Clara	B	
16	EXAR Integrated Systems	750 Palomar Avenue	Sunnyvale	A, B	2
17	Fairchild	464 Ellis Street	Mountain View	A	3
18	Fairchild	4001 Miranda Avenue	Palo Alto	B	
19	Fairchild	101 Bernal Road	San Jose	A, B	2, 3
20	Fairchild	3105 Alfred Street	Santa Clara	A	2
21	Ford Motor Company	1100 S. Main Street	Milpitas	A	4
22	Gilmore Supply	585 Robert Avenue	Santa Clara	B	
23	Great Western Chemical Co.	945 Ames Avenue	Milpitas	A, B	
24	Harris Microwave	1530 McCarthy Blvd.	Milpitas	A	6
25	Hewlett Packard	350 W. Trimble	San Jose	A	2
26	Hewlett Packard	974 E. Arques Avenue	Sunnyvale	A, B	2
27	Hewlett Packard	333 Logue Avenue	Mountain View	A, B	
28	Hewlett Packard	11000 Wolfe Road	Cupertino	A, B	
29	Hewlett Packard	1501 Page Mill Road	Palo Alto	A, B	3
30	Hewlett Packard	640 Page Mill Road	Palo Alto	A, B	
31	Hewlett Packard	Deer Creek Road	Palo Alto	A, B	
32	IBM	5600 Cottle Road	San Jose	A, B	2, 3
33	In-Print	968 Steward Drive	Sunnyvale	B	
34	Intel Corporation	365 E. Middlefield Rd.	Mountain View	A, B	3
35	Intel - Facility III	3000 Oakmead Pky	Santa Clara	A, B	2, 3
36	Intel - Magnetics	2880 Northwestern Pkwy.	Santa Clara	A, B	2, 3
37	Intersil, Inc.	1276 Hammerwood Avenue	Sunnyvale	A, B	2
38	Jones Chemical	985 Montaque Expressway	Milpitas	A, B	
39	KTI Chemicals, Inc.	1170 Sonora Avenue	Sunnyvale	A, B	2
40	Lorentz Barrel & Drum	1515 S. 10th Street	San Jose	A, B	2, 3
41	Magnetic Peripherals, Inc.	3333 Scott Blvd.	Santa Clara	A, B	2
42	Magnex Corporation	6850 Santa Theresa Blvd.	San Jose	A, B	2
43	Memorex Corporation	1200 Memorex Drive	Santa Clara	A, B	2
44	Micrel Wafer Fab (Adv. LSI)	639 N. Pastoria Avenue	Sunnyvale	A, B	2
45	Micro-Metallics	1695 S. 1st Street	San Jose	A, B	
46	Monolithic Memories (MMI)	1165 E. Arques	Sunnyvale	A, B	3

Table II-1 (Continued)

Figure 1 Map Number[1]	Site	Site Address	City	Information Source	Comments
47	Moffet Naval Air Station	Naval Air Station	Mountain View	A, B	
48	Monsanto Plastics and Resins	2710 Lafayette Street	Santa Clara	A, B	2
49	National Semiconductor	2900 Semiconductor Dr.	Santa Clara	A, B	2, 3
50	NEC	501 Ellis Street	Mountain View	A, B	
51	Pacific Nursery Pots	1015 Martin Avenue	Santa Clara	A, B	2
52	Pierce & Stevens Chemical Corp.	805 Sinclair Frontage Rd.	Milpitas	A, B	
53	Precision Media	1262 N. Lawrence Stn. Rd.	Sunnyvale	A, B	2
54	Precision Monolithics Inc.	1500 Space Park Drive	Santa Clara	A, B	2, 3
55	Qume	2350 Qume Drive	San Jose	B	
56	Raytheon	350 Ellis Street	Mountain View	A, B	3
57	Safety-Kleen	3461 Woodward Avenue	Santa Clara	B	
58	Santa Clara County Transit (SCCT)	2440 S. 7th Street	San Jose	A, B	5
59	SCCT	3990 Zanker Road	San Jose	A	
60	Scientific Gas Products	3395 De la Cruz Blvd.	Santa Clara	B	
61	Siemens Corporation	19000 Homestead Road	Cupertino	A, B	
62	Signetics	811 E. Arques Avenue	Sunnyvale	A, B	2, 3
63	Signetics	740 Kifer Road	Sunnyvale	A, B	2
64	Signetics	860 Kifer Road	Sunnyvale	A	2
65	Signetics	730 Evelyn	Sunnyvale	A	
66	Signetics	897 Stewart	Sunnyvale	A	7
67	Signetics	848 Stewart	Sunnyvale	A	2, 7
68	Signetics	830 Stewart	Sunnyvale	A	2, 7
69	Siltec	405 National Avenue	Mountain View	A, B	
70	Stanford Linear Accelerator Center (SLAC)	2575 Sand Hill Road	Palo Alto	B	
71	Solvent Service, Inc.	1021 Berryessa Road	San Jose	A, B	2
72	Spectra Physics	2905 Stender Way	Santa Clara	A, B	2, 5
73	Sperry Univac	3330 Scott Blvd.	Santa Clara	A, B	2
74	Stanford Cleaners	2875 El Camino	Palo Alto	A, B	
75	Synertek (Building 1)	3050 Coronado Blvd.	Santa Clara	A, B	2
76	Synertek (Building 3)	3001 Stender Way	Santa Clara	A	2
77	Tandem Computers	19333 Vallco Pkwy.	Cupertino	A, B	
78	Technical Coatings Co.	1000 Walsh Avenue	Santa Clara	A, B	2
79	Teledyne	1300 Terra Bella Avenue	Mountain View	A, B	3
80	Timex	20650 Valley Green Drive	Cupertino	A, B	
81	TRW Microwave Inc.	825 Stewart Drive	Sunnyvale	A, B	2
82	United Technologies (UTC)	1050 Arques	Sunnyvale	A, B	2
83	United Technologies (Stn. 0706)	P.O. Box 358, SV	San Jose	A, B	2, 5
84	United Technologies (Stn. 0635)	P.O. Box 358, SV	San Jose	A, B	2, 5
85	Van Waters & Rogers	2256 Junction Avenue	San Jose	A, B	2, 3
86	Verbatim Corp.	360 N. Pastoria Avenue	Sunnyvale	A, B	2
87	Western Forge & Flange	780 Reed Street	Santa Clara	B	
88	Westinghouse Electric Corp.	Hendy Avenue	Sunnyvale	A, B	2, 3
89	Xidex	307 Soquel Way	Sunnyvale	A, B	2
90	Zoecon Corp.	1990 Bay Road	East Palo Alto	B	3
91	Zymos Corp.	477 N. Mathilda Avenue	Sunnyvale	A, B	2

Table II-1 (Continued)

Figure 1 Map Number[1]	Site	Site Address	City	Information Source	Comments
STATUS: NO FURTHER ACTION					
1	Amdahl	1250 E. Arques	Sunnyvale	A	2
2	Applied Tech.	645 Almanor	Sunnyvale	A	2
3	Beckman Instruments	1117 California Avenue	Palo Alto	A	
4	Bell Industries	1161 N. Fairoaks Avenue	Sunnyvale	A	2
5	Burke Industries	2049 Senter Road	San Jose	A	2
6	Container Corp.	2500 De La Cruz Blvd.	Santa Clara	A	2
7	Dysan	5301 Patrick Henry Drive	Santa Clara	A	2
8	Economics Lab	640 Lenfest Road	San Jose	A	2
9	Hewlett Packard	395 Page Mill Road	Palo Alto	A, B	
10	IMP Corp.	2830 N. 1st Street	San Jose	A	2
11	Kaiser Aluminum	23333 Stevens Creek Blvd.	Cupertino	A	
12	LSI Logic	1601 McCarthy Blvd.	Milpitas	A	
13	Memotronics	1058 W. Evelyn Avenue	Sunnyvale	A	5
14	Safe-Way Chemical	909 Stockton Avenue	San Jose	A	2
15	Shell Oil	2165 O'Toole Avenue	San Jose	A	5
16	Signetics	3625 Peterson Way	Santa Clara	A	
17	U.S. Cellulose	520 Parrot Street	San Jose	A	
18	Watkins-Johnson	3333 Hillview Avenue	Palo Alto	A	
19	Zilog/Bridge	10440 Bubb Road	Cupertino	A	
STATUS: NO CONTAMINATION					
1	Hi Line Paints	500 Salmare Avenue	Cupertino	A	
2	IBM	2159 S. 10th Street	San Jose	A	2
3	Intersil, Inc.	10910 N. Tantau Avenue	Cupertino	A, B	
4	K & H Finishing	2302 Trade Zone Blvd.	San Jose	A	5
5	Micromask	695 Vaqueros Avenue	Sunnyvale	A	2, 5
6	MMI	2175 Mission College	Santa Clara	A	2
7	Owens Corning	960 Central Expressway	Santa Clara	A	
8	San Jose Graphics	696 Trimble Road	San Jose	A	
9	Sealex	582 Stockton Avenue	San Jose	A	5
10	Sierra Chemical	1001 Yosemite Dr.	Milpitas	A	
11	Signetics	3600 Tannery Way	Santa Clara	A	
12	Signetics	305 Mathilda	Sunnyvale	A	
13	STC Computer	3450 Central Expressway	Santa Clara	A	2
14	Tandy	1600 Memorex Drive	Santa Clara	A	2, 5
15	Toshiba	1220 Midas Way	Sunnyvale	A	2
16	Zilog, Inc.	10460 Bubb Road	Cupertino	A	

NOTES:

Information Sources: A - 205J Study Site (December, 1984) B - Toxics Cleanup Division Case List.

[1]Figure 1 map number may be different than the 205j map number.

[2]Site was evaluated in 205J Risk Assessment that was reported in February, 1985.

[3]Site is proposed for the National Priority List (NPL) Update No. 2.

[4]205J Risk Assessment has classified the Ford site under both ongoing and no contamination due to differing results of Phase I and Phase II reports. CH2M HILL has classed this site as ongoing only.

[5]205J Risk Assessment identifies site as needing further follow-up due to lack of information for classification at the time of the report.

[6]Site identified as ongoing in 205J study and inactive by the RWQCB staff. Remedial action was implemented and monitoring is ongoing.

[7]Site identified as ongoing in 205J study and is not considered a site by the RWQCB staff. Case status is under evaluation.

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Part III
SOUTH BAY MULTI-SITE COOPERATIVE AGREEMENT ($1,000,000)

The goals of the South Bay Multi-Site Cooperative Agreement (MSCA) are stated below.

- To accelerate the clean-up of groundwater contamination in the South Bay.
- To augment the RWQCB's existing programs to ensure that the EPA's requirements, as defined in the National Contingency Plan (NCP), are met for: the 19 South Bay sites currently proposed to be included on the National Priorities List (NPL) Update No. 2; for additional sites to be recommended in the future for listing on the NPL; and, for initial work at new sites up to the point where EPA has sufficient data to rank the new sites.
- To acquire the data necessary to evaluate all sites not currently proposed for inclusion on the NPL for possible future inclusion on the NPL.
- To evaluate the long-term and regional effects on the groundwater resource caused by the investigative and clean-up activities to be performed in the South Bay.

The goals listed above will be accomplished by providing funding to support the activities of state and local agencies responsible for coordinating and enforcing the groundwater clean-up program in the South Bay.[1] The agencies involved in the MSCA are the EPA, RWQCB, DHS, SCVWD, and the SWRCB.

The EPA has determined that the RWQCB Site Investigation and Cleanup Procedures are substantially in conformance with the NCP. This determination was made through an in-depth study conducted and reported by EPA's contractor, CH2M HILL, between May and August, 1985. A copy of the final report for this study is presented in Appendix B of this Work Plan. To ensure conformance of their procedures with the NCP, the RWQCB, in a letter dated July 29, 1985, (Appendix C), agreed to make changes in their current program for those South Bay sites recommended for listing on the NPL and for initial

[1] SWRCB will receive funds from the EPA and disperse them to the RWQCB and the SCVWD.

work at new sites up to the point where EPA has sufficient data to rank the new sites. These changes are:

- o Take a limited number of split samples at appropriate sites where PRPs are performing a RI/FS (site investigation/alternative evaluation)
- o Notify EPA of sites where PRPs are conducting Site Investigations (initial evaluation) so that EPA can evaluate the need for their involvement
- o Require that detailed sampling, QA, and site safety plans be prepared for each site. The RWQCB staff will prepare guidelines that conform with the NCP to instruct PRPs in preparing these plans
- o Require PRPs to document all alternatives initially considered as remedial measures and reasons for eliminating any of these measures
- o Change mid-range alternatives requiring consideration to those that:
  - allow degradation and exceed standards
  - allow degradation and attain standards
  - do not attain standards but do not allow for loss of beneficial use
- o Require that community relations plans be prepared for each site
- o Hold a public meeting for each site specifically to present FS results
- o Prepare a document to address publicly raised issues.

The South Bay sites are the 91 sites identified as "ongoing" in Table II-1 and any new sites identified through future Preliminary Assessments (PAs) and/or PRP-funded Site Inspections (SIs). The South Bay Program geographical boundary is shown in Figure 1.

The foundation of the MSCA is the South Bay Program discussed in Part II of this report. EPA has set aside one million dollars for the MSCA. Meetings between EPA, RWQCB, and SCVWD produced tasks and a budget for the program to be funded under the MSCA. Table III-2 presents a summary of the cost estimates for the tasks to be funded by the MSCA. Detailed task descriptions and cost tables are presented by task and subtask in the remainder of this section.

The agencies involved in the MSCA recognize that additional funding and staff beyond the initial $1 million may be required to fully address the South Bay problem. To this end, the agencies involved in the MSCA are in the process of developing additional task descriptions and staff budget estimates for the remainder of the South Bay Program. The EPA is currently pursuing funding for the additional tasks.

Table III-1
Cost Estimate for All Tasks to be Funded with the
First Million Dollars of the
South Bay Multi-Site Cooperative Agreement (MSCA)[1]
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Program Element	Task/Subtask	Responsible Agency	Estimated Staff Needs: Staff Level	Estimated Staff Needs: Staff Years	Estimated Staff Costs[2] (dollars)	Estimated Expense Costs[3] (dollars)	Estimated Contractor Costs (dollars)	Total Estimated Costs (dollars): RWQCB Subtask	RWQCB Task	RWQCB Element	SCVWD Subtask	SCVWD Task	SCVWD Element
A. Program Management													
	A1. Program Management	RWQCB	Supervising WRC[4] Engineer	1.0	77,201	7,352[5]							
			WRC Engineer	0.25	11,517	1,225			97,295	97,295			
B. Site Management System													
	B1. Site Management System	RWQCB	WRC Engineer	0.25	11,517	1,225							
			Data Processing Technician	0.75	23,581	8,467[6]							
			Office Assistant II	0.25	6,437	1,225			52,452	52,452			
C. Enforcement													
	C1. WDRs	RWQCB	WRC Engineer	1.0	46,071	4,900							
			Office Assistant II	0.25	6,437	1,225			58,633				
	C2. Formal Enforcement Review	RWQCB	WRC Engineer	1.0	46,071	4,900							
			Office Assistant II	0.25	6,437	1,225			58,633	117,266			
D. Community Involvement													
	D1. Community Involvement	RWQCB	Information Officer Assistant I	1.0	54,196	43,622[7]							
			Data Processing Technician	0.25	7,861	1,225							
			Office Assistant II	0.25	6,437	1,225	30,000		144,566	144,566			
		SCVWD				8,632						8,632	8,632

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Program Element	Task/Subtask	Responsible Agency	Estimated Staff Needs: Staff Level	Estimated Staff Needs: Staff Years	Estimated Staff Costs[2] (dollars)	Estimated Expense Costs[3] (dollars)	Estimated Contractor Costs (dollars)	Total Estimated Costs (dollars): RWQCB Subtask	RWQCB Task	RWQCB Element	SCVWD Subtask	SCVWD Task	SCVWD Element
E. Tier I Activities													
	E1. Identification of New Sites	RWQCB											
	E1a. Screening of New Sites to Conduct PA on most Sensitive Sites	RWQCB	WRC Engineer Office Assistant II	1.5 0.25	69,106 6,437	7,350 1,225		84,118					
	E1b. Oversight of PRP SI	RWQCB	WRC Engineer	0.5	23,036	2,450		25,486	109,604				
	E2. Inventory Existing Initial Source Removal Actions (ISRAs) and Identify New ISRAs	RWQCB	WRC Engineer	1.0	46,071	4,900			50,971				
	E3. RWQCB Oversight of PRP Activities	RWQCB											
	E3a. PRP Quality Assurance Project Plans and Site Safety Plans	RWQCB	WRC Engineer	1.0	46,071	4,900		50,971					
	E3b. EPA Coordination	RWQCB	WRC Engineer Office Assistant II	1.5 0.25	69,106 6,437	7,350 1,225		84,118	135,089	295,664			
F. Tier II Activities	Not funded in this portion of the MSCA												

Program Element	Task/Subtask	Responsible Agency	Estimated Staff Needs: Staff Level	Staff Years	Estimated Staff Costs[2] (dollars)	Estimated Expense Costs[3] (dollars)	Estimated Contractor Costs (dollars)	Total Estimated Costs (dollars): RWQCB Subtask	RWQCB Task	RWQCB Element	SCVWD Subtask	SCVWD Task	SCVWD Element
G. Tier III Activities													
	G1. Program Analysis and Development	RWQCB	Senior WRC Engineer	1.0	70,198	4,900							
			Office Assistant II	0.25	6,437	1,225			82,760				
	G2. Assess Need for Data Management System	RWQCB					10,000			92,760			
	G3. Well Projects												
	G3a. Workplan Preparation	SCVWD	Senior Civil Engineer	0.05	5,819	291					6,110		
	G3b. Quality Assurance Plan/ Safety Plan Preparation	SCVWD	Senior Civil Engineer	0.20	23,275	1,164					24,439		
	G3c. Well Inventory	SCVWD	Associate Civil Engineer	0.25	25,113	1,256					148,596		
			Engineering Technician I	0.40	28,420	1,421							
			Engineering Aide I	1.45	76,558	15,828[8]							
	G3d. Well Project Management	SCVWD	Senior Civil Engineer	0.10	11,638	582					12,220	191,365	191,365
			GRAND TOTAL (All elements)				Cost:	$800,003					$199,997
							Staff Years:	13.75					2.45

Notes:

[1]Costs are rounded to the nearest $1.

[2]RWQCB staff costs include fringe benefits (at 30 percent of salary costs) and indirect costs (at 33.21 percent of salary plus fringe benefit costs). SCVWD staff costs include fringe benefits (at 35 percent of salary costs) and overhead (at 110 percent of salary costs).

[3]RWQCB expenses include supplies, communication, postage, facility, and travel costs. Detail expense breakdowns are presented with the text describing each task. SCVWD expenses are estimated at 5 percent of the total labor costs (including fringe benefits and overhead) and include travel.

[4]Water Resources Control

[5]Expenses include an additional $2,452 for miscellaneous expenses associated with Program Management.

[6]Expenses include an additional $4,792 for computer equipment.

[7]Expenses include an additional $38,722 for expenses associated with community involvement activities.

[8]Expenses include $12,000 for purchase of two proton magnetometers.

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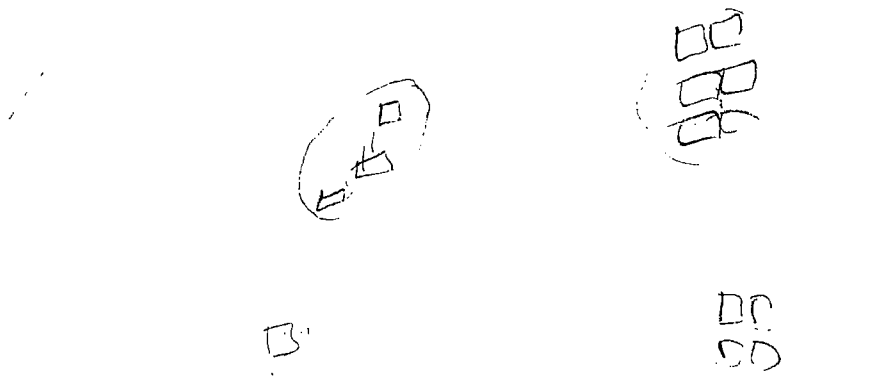

PROGRAM ELEMENT A: PROGRAM MANAGEMENT

TASK A1. PROGRAM MANAGEMENT ($97,295)

The RWQCB will be responsible for coordinating and implementing the South Bay Program. One Supervising Water Resources Control (WRC) Engineer will be appointed to oversee all South Bay activities. The duties of the Supervising WRC Engineer will include, but not be limited to, the following:

- Maintaining the direction, scope, and quality of the South Bay Program
- Planning and oversight of the overall program schedule and budget
- Interagency coordination
- Program staffing
- Community involvement activities
- Reviewing and recommending enforcement actions
- Program analysis and development
- Managing the SCVWD subcontract.

The equivalent of 25 percent of one WRC Engineer staff year will be needed to assist the Supervising WRC Engineer in Program Management. Duties for the WRC Engineer will include, but not be limited to, the following:

- Program status tracking
- Preparation of program charts and schedules
- Budget presentations.

Products

The product for Task A1 is successful completion of South Bay tasks funded by the MSCA.

State-Budgeted Activities

Task A1 involves supervision of the implementation of specific tasks included in the MSCA. As such, there is no existing state-funded base program.

Cost

A detailed cost breakdown for Task A1 is presented in Table III-2.

Table III-2
Detailed Cost Estimate for Task A-1

Personnel	Staff Years	Annual Salary	Cost
Supervising WRC Engineer	1.0	$44,580	$44,580
WRC Engineer	0.25	26,604	6,651
TOTAL			$51,231
Fringe Benefits			
Calculated at 30 percent of personnel costs			$15,369
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			22,118
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			250
Communication at $800/sy			1,000
Postage at $200/sy			250
Facility (office space) at $1,200/sy			1,500
Travel at $2,500/sy			3,125
Total General Expenses			$6,125
Additional Miscellaneous Expenses			2,452
TOTAL COST for Task A1.			$97,295

PROGRAM ELEMENT B:
SITE MANAGEMENT SYSTEM

TASK B1. SITE MANAGEMENT SYSTEM ($52,452)

EPA and the RWQCB have identified the need for a computerized system to track industry's performance in conducting RI (site investigation), FS (alternatives evaluation), and remedial action implementations on a site specific basis for all South Bay sites. The site management system will allow EPA and the State to identify sites where enforcement action is necessary to bring remedial activities back on schedule. This system will aid RWQCB staff in managing case loads by tracking key RWQCB actions such as review and approval of work plans and reports. The system will also provide summary information to RWQCB and EPA management level personnel. To assist in these efforts, a computer budget for the RWQCB is provided in the MSCA.

To develop a site management system, specific needs of the RWQCB staff and the EPA were determined. A system was designed that incorporated the requirements expressed by the RWQCB staff and the EPA. The system components are summarized below.

Case Description

A case description component will provide basic site information such as: name, location, type of facility, whether or not on the NPL, primary contaminants and source (if known), contaminant level, nearest drinking well, and case status.

The description information will be updated quarterly and will provide, at a quick glance, a summary of a site's problem and what has been done to date. This will be useful to RWQCB and EPA management and to RWQCB staff who may have to fill in on a case in the absence of the regularly assigned staff member.

The case description component described above can be used as a community involvement site profile sheet. The list of case description items was developed with the idea that it could be used as a site profile sheet to be distributed to the interested public.

Case Milestone Tracking

The milestone tracking component consists of a list of established milestones in the RWQCB case investigation/cleanup process (including RWQCB review and approval activities), along with columns for entering due dates, delivery dates, variances, and comments explaining variances. The system is

designed to tailor the milestones to a specific site by allowing deletion of inapplicable items, and addition of milestones that are not on the standard list. In this way, for example, individual steps in an investigation can be listed, and site specific interim remedial actions can be tracked. Although the milestones listed generally proceed chronologically, some may run concurrently or a later listed activity may occur before an earlier one. For example, interim remedial actions may occur before site characterization is completed.

The milestone tracking component will allow both RWQCB and EPA staff and management to follow the site investigation/cleanup progress and to readily identify sites with lagging progress for possible enforcement action. This system component will be updated monthly.

Summary Reports

The summary report is designed to assess overall site progress and provide summary statistics. Such a report will include the number of cases at different stages, number of cases behind schedule and on schedule, and number of cases on which different types of enforcement actions have been taken. In addition, the system will have the capability of providing the names of sites in those categories.

Another summary report that will be possible with the site management system is a listing of the sites with their associated status information.

In addition to providing RWQCB and EPA management with summary information, the reports described in this section will be used to periodically update the South Bay Task Force and the RWQCB. Summary reports are anticipated to be generated quarterly.

System Input and Access

The RWQCB staff will enter information into the system. EPA will be able to access the current case descriptions, milestone tracking information, and summary reports through a modem.

Operating the Site Management System

As part of the MSCA, the RWQCB staff will designate one Data Processing Technician to manage the system. Duties of the Data Processing Technician will include data entry, report generation, programming support, and overall system coordination. System management will require an estimated 75 percent of a Data Processing Technician staff year. Additionally, the RWQCB staff will use the equivalent of 25 percent of a WRC Engineer staff year and 25 percent of an Office

Assistant II staff year to summarize and compile data for entry into the Site Management System.

Products

The milestone database will be created and updated monthly. Summary reports will be produced quarterly to aid in assessing overall site progress and to provide summary statistics. Site descriptions will also be updated quarterly.

State-Budgeted Activities

There is no existing base program of State-funded activities for the Site Management System.

Cost

A detailed cost breakdown for Task B1 is presented in Table III-3.

Table III-3
Detailed Cost Estimate for Task B1

Personnel	Staff Years	Annual Salary	Cost
Data Processing Technician	0.75	$18,156	$13,617
WRC Engineer	0.25	26,604	6,651
Office Assistant II	0.25	14,868	3,717
TOTAL			$23,985
Fringe Benefits			
Calculated at 30 percent of personnel costs			$7,195
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			10,355
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			250
Communication at $800/sy			1,000
Postage at $200/sy			250
Facility (office space) at $1,200/sy			1,500
Travel at $2,500/sy			3,125
Total General Expenses			$6,125
Computer Equipment			$4,792
TOTAL COST for Task B1.			$52,452

PROGRAM ELEMENT C: ENFORCEMENT

The purpose of the Enforcement element of the South Bay Program is to establish and implement an optimum strategy for formal regulation of the South Bay sites. The available RWQCB regulatory mechanisms include administrative enforcement, the Waste Discharge Requirements (WDR), the formal enforcement orders (Cleanup and Abatement Orders (CAO) or Cease and Desist Orders (CDO)), and referral to the State Attorney General for assessment of monetary penalties. The following paragraphs describe the above RWQCB regulatory mechanisms and explain the circumstances under which each will be applied in the South Bay. EPA, DHS and RWQCB are in the process of finalizing an enforcement agreement. This agreement will delineate the role each agency will have at groundwater contamination sites in the South Bay.

Administrative Enforcement is staff level activity directed to obtain investigation and cleanup of unauthorized discharges. In general such activity is carried out under section 13267 of the California Water Code which allows the RWQCB's Executive Officer to require technical reports under such circumstances. The RWQCB staff intends to use this mechanism to obtain initial information in the early stages of site investigation.

Waste Discharge Requirements (WDRs) are the RWQCB's normal means of regulating ongoing discharges. WDRs are considered on a case-by-case basis by the RWQCB in public hearings. WDRs contain findings, specifications and provisions (including time schedules), prohibitions, and where applicable, concentration limits for the discharge of pollutants. WDRs have not historically been applied to clean-ups or accidental discharges. Groundwater contamination cases, however, have certain characteristics which make their regulation under WDRs desirable. These characteristics include the probability of continued discharge from the soil to groundwater long after the source is removed, the long-term nature of investigative and clean-up activities, and the need for an ongoing monitoring program to continue after remedial measures are completed in order to verify the effectiveness of remedial measures.

With funding provided by the MSCA, the RWQCB will use WDRs as the primary regulatory mechanism for routine regulation of investigative and cleanup activities at groundwater contamination sites.

The Cleanup and Abatement Order (CAO) can be issued by the RWQCB's Executive Officer under section 13304 of the California Water Code. Such an order can be issued without

formal RWQCB action, and is directly referable to the Attorney General for judicial enforcement in the event of a violation.

The CAO represents a more formal approach to the administrative resolution of unauthorized discharges. As such it has the advantage of expeditious issuance and of being directly enforceable when a satisfactory cleanup is not achieved within an acceptable time frame. The CAO is primarily intended as an expedient but formal method to deal with accidents, single incidents, or other short-term occurrences which can be abated and cleaned up in a relatively short time with no residual discharge or long term implications.

The Cease and Desist Order (CDO), described in Section 13301 of the Water Code, can be issued by the RWQCB for cases of groundwater contamination by hazardous materials. The basis for issuance would be violation of the RWQCB San Francisco Bay Basin Plan which prohibits the discharge of hazardous materials to groundwater. The CDO is the RWQCB's strongest administrative enforcement mechanism. A violation of the CAO may result in immediate liability for monetary penalties. As with the adoption of WDRs, a CDO is considered by the RWQCB at a public hearing. In this case, however, the enforcement action carries negative connotations in the eyes of the discharger and the public. This consideration is usually very significant to dischargers, and is likely to elicit vigorous opposition in many cases. The RWQCB believes that the CDO should be reserved for cases where satisfactory cleanup efforts are not being obtained through more routine regulatory efforts.

The assessment of Civil Monetary Penalties is another enforcement mechanism. The California Water Code provides several levels of penalties for dischargers depending on the circumstances and the materials discharged. Under these provisions, the illegal discharge incident may be referred to the Attorney General for penalties regardless of which RWQCB enforcement mechanism was used to formalize the requirement of remedial measures. California law requires, in most cases, that legal action for recovery of monetary remedies be filed within three years of discovery of the discharge.

Referral for violation of a RWQCB Order will thus exist as long as the Order remains in effect.

TASK C1. WASTE DISCHARGE REQUIREMENTS (WDRs) ($58,633)

The purpose of this task is to accelerate the pace at which South Bay sites are placed under formal regulation by WDRs. Although the RWQCB staff stated that they intended to place South Bay sites under WDRs, the urgent need for the staff's technical review of PRP work and the relative expediency of

administrative enforcement have caused the staff to generally postpone the preparation of WDRs. At this time, however, EPA and RWQCB staff have agreed that formal regulation of sites with long-term investigation and cleanup requirements is an important objective of the MSCA.

Under Task C1, a minimum amount of staff time will be devoted specifically to the adoption of WDRs for South Bay sites. Previous experience has shown that approximately seven WDRs can be processed for each staff year expended. To prepare and adopt a WDR, the following activities are necessary: writing the Tentative Order and Self Monitoring Program (SMP), circulating the order for review, responding to comments, preparing a RWQCB Hearing presentation, and preparing and mailing the Final Order. A significant amount of staff time will be required to adopt WDRs for the 91 South Bay sites. Funding of three WRC Engineer staff years would probably result in adoption of all 91 WDRs within three to five years. Due to the funding constraints of this first million dollars of the MSCA, it is proposed that, for the present, the equivalent of one WRC Engineer staff year and 25 percent of an Office Assistant staff year be provided for this effort.

Products

Under Task C1, WDRs will be prepared and considered for at least seven additional South Bay sites.

State-Budgeted Activities

The anticipated State-funded base program will contain some manpower for reviewing and approving site investigation proposals for South Bay sites. No staffing, however, is designated for writing WDRs at these sites. Some resources would probably be diverted from other programs for the purpose of writing WDRs if Task C1 was not funded under the MSCA.

Cost

A detailed cost breakdown for Task C1 is presented in Table III-4.

Table III-4
Detailed Cost Estimate for Task C1.

Personnel	Staff Years	Annual Salary	Cost
WRC Engineer	1.0	26,604	26,604
Office Assistant II	0.25	14,868	3,717
TOTAL			$30,321
Fringe Benefits			
Calculated at 30 percent of personnel costs			$9,096
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			13,091
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			250
Communication at $800/sy			1,000
Postage at $200/sy			250
Facility (office space) at $1,200/sy			1,500
Travel at $2,500/sy			3,125
Total General Expenses			$6,125
TOTAL COST for Task C1.			$58,633

TASK C2. FORMAL ENFORCEMENT REVIEW ($58,633)

Under Task C2, the RWQCB will perform a comprehensive review of the enforcement status of each of the 91 South Bay sites with respect to the formal enforcement options available and the MSCA Enforcement Agreement. The objective of this review will be to identify any sites where the investigation and/or cleanup activities would be accelerated or significantly improved by issuing a RWQCB formal enforcement order (CAO or CDO), referral to the Attorney General to seek Civil Monetary Penalties, or by initiating other formal enforcement options through EPA or DOHS.

Task C2 will be implemented with the equivalent of one WRC Engineer staff year and 25 percent of an Office Assistant II staff year.

Products

The product of Task C2 will be a report summarizing the results of a comprehensive review of the enforcement status of the South Bay sites. The report will contain recommendations for the optimization of overall enforcement strategy and recommendations for enforcement needs at specific sites. The RWQCB intends to aggressively pursue formal enforcement against PRPs where needed or implement the enforcement agreement where appropriate.

State-Budgeted Activities

The RWQCB has budgeted some staff for administrative enforcement at South Bay sites during the period of the MSCA. The RWQCB has also budgeted some staff effort for formal enforcement. There is, however, no existing or anticipated staffing for a comprehensive review or preparation of a summary report.

Cost

A detailed cost breakdown for Task C2 is presented in Table III-5.

Table III-5
Detailed Cost Estimate for Task C2

Personnel	Staff Years	Annual Salary	Cost
WRC Engineer	1.0	26,604	26,604
Office Assistant II	0.25	14,868	3,717
TOTAL			$30,321
Fringe Benefits			
Calculated at 30 percent of personnel costs			$9,096
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			13,091
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			250
Communication at $800/sy			1,000
Postage at $200/sy			250
Facility (office space) at $1,200/sy			1,500
Travel at $2,500/sy			3,125
Total General Expenses			$6,125
TOTAL COST for Task C2.			$58,633

PROGRAM ELEMENT D:
COMMUNITY INVOLVEMENT

TASK D1. COMMUNITY INVOLVEMENT ($144,566 RWQCB, $8,632 SCVWD)

The main objectives of the community involvement activities to be performed under the MSCA are:

- Provide the general public with information on ground water systems; water supply sources; measurement of water quality; hazardous waste regulatory processes; and scope, progress and findings of remedial response activities. Provide sufficient background information about technical and environmental issues to help the public understand and assess possible remedial actions. Provide all information, especially technical findings, in a form understandable to the general public.

- Provide elected officials and the media with timely, detailed information at key points throughout program activities. Use the media as a major means of disseminating information to the general public.

- Establish ongoing two-way information exchange with environmental, public interest, and other concerned groups throughout the remedial response program.

- Provide the means for all interested individuals to express concerns and make inquiries throughout the project activities (the opportunity for ongoing two-way communication is particularly important because of the length and complexity of the project).

- Use the Task Force for overall coordination and review of community involvement efforts. Create an interagency community involvement team to further coordinate the flow of information from agencies to the public.

- Monitor public concerns and information needs throughout the project. Modify the community involvement plan as necessary to respond to changes in community attitudes and needs.

These objectives are similar to those of the EPA areawide Community Involvement Plan issued in April, 1985.

Community involvement activities that will be conducted under the MSCA will function independently of, but nevertheless, be a major component of EPA's areawide community involvement strategy. Under this approach, EPA will assume the lead role in overall coordination of community involvement activities in the South Bay. Under the MSCA, funds for community involvement activities will be appropriated to the RWQCB and the SCVWD; the agencies with responsibility for carrying out major portions of the community involvement plan. The RWQCB will be responsible for community involvement activities at the specific site level. They will revise their ongoing community involvement activities to provide for a public hearing at the feasibility study (alternatives evaluation) phase and utilize techniques such as fact sheets, press releases, etc. The SCVWD will be responsible for regional community involvement activities that relate to the tasks they are preparing as part of the MSCA. The specific activities to be performed by the RWQCB and SCVWD are described in the April 1985 Community Involvement Plan (Appendix D).

To implement the RWQCB community involvement activities funded under the MSCA and discussed in the April 1985 Community Involvement Plan (Appendix D), an Information Officer I (one staff year), the equivalent of 25 percent of a Data Processing Technician staff year, and the equivalent of 25 percent of one Office Assistant II staff year are needed. Additionally, one full time contractor to assist the information officer with graphic design, media, etc. will be needed. As shown in Table III-6, $38,722 in miscellaneous expenses has also been allocated to the RWQCB to cover the non-labor costs associated with the community involvement activities.

To implement the SCVWD community involvement activities, $8,632 has been allocated to cover miscellaneous expenses. As shown in Table III-6, the major emphasis of the SCVWD's involvement will be to ensure that private well users receive sufficient and understandable information about private well sampling and monitoring. The labor costs will be budgeted separately by SCVWD.

Products

The RWQCB will produce the following products from the community involvement activities mentioned above and presented in Appendix D:

- On an "as-needed" basis, for controversial sites or sites with key issues, EPA will assist the RWQCB in developing brief specific community involvement plans agreeable to both agencies. These limited plans will describe the situation at the site and

delineate the specific community involvement activities planned for that site.

- Technical summaries for 91 South Bay sites and for any new sites requiring work beyond an initial site investigation
- Site-specific mailing lists for RWQCB hearing announcements and materials
- Mailings to the site-specific lists when the RWQCB considers items regarding their specific sites or the South Bay regional problems
- Press releases and media briefings (on an "as needed" basis)
- Private well owner mailing list
- Draft fact sheets
- Public information repositories.

State-Budgeted Activities

No staffing is currently budgeted or proposed for community involvement activities by the State-funded base program.

District Funding

The SCVWD will fund the labor necessary for completion of the SCVWD community involvement tasks. MSCA funds will supplement the SCVWD expense budget for Community Involvement Activities.

Cost

A detailed cost breakdown for Task D1 is presented in Table III-7.

Table III-6
Agency Responsibilities and Expenses
For Community Involvement Activities

RWQCB[a]	Cost (dollars)
ICIT[b] participation	100
Site-specific mailing list	250
Information repository	250
Site-specific information contact	200
Site-specific public notification:	
o Mailings List Development	2,200
o Announcements	6,600
o Technical summaries	6,250
o Public notices	18,650
o Public comment periods	
o Hearings	500
Site profile update and distribution	3,572
Press releases	50
Media briefings	100
Responsiveness summary	
TOTAL	$ 38,722

SCVWD[a]	Cost (dollars)
ICIT[b] participation	100
Private well owner mailing list	250
Fact sheet assistance	300
Telephone network	300
Press releases	250
Media briefings	300
Private well user information program	7,132
TOTAL	$ 8,632

[a] These site-specific community involvement activities will be funded, at the level, shown by the MSCA.

[b] Interagency Community Involvement Team.

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Table III-7
Detailed Cost Estimate for Task D-1

Personnel	Staff Years	Annual Salary	Cost
Information Officer I	1.0	$31,296	$31,296
Data Processing Technician	0.25	18,156	4,539
Office Assistant II	0.25	14,868	3,717
TOTAL			$39,552 (RWQCB)
Fringe Benefits			
Calculated at 30 percent of personnel costs			$11,866 (RWQCB)
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			17,076 (RWQCB)
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			300
Communication at $800/sy			1,200
Postage at $200/sy			300
Facility (office space) at $1,200/sy			1,800
Travel at $2,500/sy			3,750
Total General Expenses			$7,350 (RWQCB)
Community Relations Expenses			
For additional expenses (See Table 3)			$38,722 (RWQCB)
			8,632 (SCVWD)
Contractor Expenses			
One full time contractor staff as the Information Officer's assistant			$30,000 (RWQCB)
TOTAL COST for Task D1.			$153,706
			($144,566 RWQCB)
			($8,632 SCVWD)

PROGRAM ELEMENT E:
TIER I ACTIVITIES

As discussed previously, Tier I activities are those activities that will occur at the specific sites in the South Bay. The following paragraphs present a brief description of the activities to be performed under each task and subtask and a detailed cost breakdown for each task and subtask.

TASK E1. IDENTIFICATION OF NEW SITES ($109,604)

Under this task, the RWQCB staff will conduct Preliminary Assessments (PA) and oversee PRP Site Inspections (SI). EPA Region 9 guidelines for conducting PAs and SIs will be followed.

Subtask E1a. Screening of New Sites in order to Conduct PAs on Most Sensitive Sites ($84,118)

The RWQCB staff will screen all reports of potential groundwater contamination sites in the South Bay from all sources such as private citizens, local agencies, and environmental groups. After this initial screening, the RWQCB staff will arrive at approximately 50 sites considered highest priority. Evaluation during screening will be based on site location, data sources, suspected waste characteristics and potential adverse effects. The RWQCB staff will complete an ERRIS/CERCLIS form for each site screened and submit the forms to EPA.

For each of the estimated 50 highest priority sites, the RWQCB staff will conduct a PA. The primary purpose of a PA is to determine the current status of a site and which, if any, action is appropriate for the site (i.e., RI/FS, RA, etc.). The information required to make this determination includes the quantity and characteristics of hazardous substances, pollutant dispersal pathways, characteristics of the affected environment, and past site management practices. Based on this information, the RWQCB staff will recommend to EPA the appropriate response action, if any, to be taken.

This subtask will be accomplished with the equivalent of one and a half WRC Engineer staff years and 25 percent of an Office Assistant II staff year.

Products

For new reports of non-fuel underground tank leak sites in the South Bay, the RWQCB staff will produce the following items:

- o A completed EPA Form 2070-12
- o A transmittal memorandum to EPA
- o A site file
- o A completed ERRIS/CERCLIS sheet.

The staffing proposed as part of the MSCA is adequate to produce the above for up to 50 new sites. If more than 50 new sites are reported, it will be necessary to pre-screen these sites and select those 50 which appear to be the most significant. The MSCA proposed staffing will be adequate to perform such pre-screening for up to 150 total sites. The RWQCB's pre-screening process will be modified to include collecting the additional information needed by EPA for its Preliminary Assessment process, including completing the appropriate forms and documentation.

State-Budgeted Activities

Screening of initial reports is an ongoing state-funded initial activity. The staffing proposed as part of this task under the MSCA will be used to extend the scope of the RWQCB staff's screening to include collecting the additional information needed by EPA for its PA process and to complete the forms and documentation required by EPA. The existing State-funded program does not contain any available staffing for such activities.

Cost

A detailed cost breakdown for Subtask E1a is presented in Table III-8.

Table III-8
Detailed Cost Estimate for Subtask E1a

Personnel	Staff Years	Annual Salary	Cost
WRC Engineer	1.50	26,604	39,906
Office Assistant II	0.25	14,868	3,717
TOTAL			$43,623

Fringe Benefits	
Calculated at 30 percent of personnel costs	$13,087
Indirect Costs	
Calculated at 33.21 percent of personnel costs plus fringe benefits	18,833
General Expenses	
Calculated on an average staff year (sy) basis:	
Supplies (paper, pencils, copies, etc.) at $200/sy	350
Communication at $800/sy	1,400
Postage at $200/sy	350
Facility (office space) at $1,200/sy	2,100
Travel at $2,500/sy	4,375
Total General Expenses	$8,575
TOTAL COST for Subtask E1a.	$84,118

Subtask E1b. Oversight of PRP SI ($25,486)

Of the highest priority sites, the RWQCB staff will require PRPs at approximately 30 sites to conduct Site Inspections (SI). The RWQCB staff will use existing or new data generated by the PRPs during site investigations that are overseen by RWQCB to complete EPA's SI form. The RWQCB staff will insure the quality of data gathered by the PRPs by requiring and approving appropriate quality assurance and control documents. The SI is expected to provide additional data sufficient to rank the site using EPA's Hazard Ranking System and to aid in making judgements on what further actions are required at the site. Information gained from the SIs may also confirm preliminary assessment data and update site conditions. The scope of the SI can vary from a minor sampling visit to a detailed hydrological assessment, depending on data gaps identified in the PA.

The equivalent of one half of a WRC Engineer staff year will be needed for this subtask.

Products

The products of Subtask E1b will be completed initial site investigations for up to 30 new non-fuel South Bay sites. For each of these sites, the RWQCB staff will complete EPA Form 2070-13 and submit the form to EPA.

State-Budgeted Activities

As in the case of subtask E1a, the staffing proposed for this task will be used to modify the RWQCB procedures to include collecting the additional information requested by EPA and to complete the specific forms for summarizing and documenting the results. The anticipated State budget does not include these extra activities, and would thus be inadequate to accomplish them.

Cost

A detailed cost breakdown for Subtask E1b is presented in Table III-9.

Table III-9
Detailed Cost Estimate for Subtask E1b

Personnel	Staff Years	Annual Salary	Cost
WRC Engineer	0.50	26,604	$13,302
TOTAL			$13,302
Fringe Benefits			
Calculated at 30 percent of personnel costs			$3,991
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			5,743
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			100
Communication at $800/sy			400
Postage at $200/sy			100
Facility (office space) at $1,200/sy			600
Travel at $2,500/sy			1,250
Total General Expenses			$2,450
TOTAL COST for Subtask E1b.			$25,486

TASK E2. INVENTORY EXISTING AND IDENTIFY NEW REMOVAL ACTIONS ($50,971)

A Removal Action (RA) is defined in the proposed NCP (February 12, 1985) as an action taken to reduce or eliminate a significant threat to the public health, welfare, or the environment caused by an uncontrolled waste site. The RA is a solution that can be readily implemented, such as temporary provision of water supplies or removal of hazardous materials.

Under this task the RWQCB staff will identify sites where RAs are needed to reduce or eliminate threats to public health, welfare, or the environment by:

- Completing a list of existing RAs that have been taken or are in progress at South Bay sites
- Conducting a comprehensive review existing sites where no RAs have occurred to determine whether or not RAs are needed
- Reviewing new sites to determine whether or not RAs are needed

These site reviews will serve as a basis for possible EPA-funded RAs under an amendment to this MSCA.

The equivalent of one WRC Engineer staff year will be needed for this task.

Products

The product for Task E2 will be a list containing the information described in the task description. This list will be submitted to EPA with recommendations relative to any identified need for EPA-funded RAs.

State-Budgeted Activities

The purpose of Task E2 is to compile, summarize, and report the status of a specific element of the existing RWQCB staff case handling activities. Existing State budget does not contain staff for that purpose.

Cost

A detailed cost breakdown for Task E2 is presented in Table III-10.

Table III-10
Detailed Cost Estimate for Task E2

Personnel	Staff Years	Annual Salary	Cost
WRC Engineer	1.00	26,604	$26,604
TOTAL			$26,604
Fringe Benefits			
Calculated at 30 percent of personnel costs			$7,981
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			1,486
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			200
Communication at $800/sy			800
Postage at $200/sy			200
Facility (office space) at $1,200/sy			1,200
Travel at $2,500/sy			2,500
Total General Expenses			$4,900
TOTAL COST for Task E2.			$50,971

TASK E3. RWQCB OVERSIGHT OF PRP ACTIVITIES ($135,089)

Under this task, the RWQCB staff will oversee PRP RI/FS (site investigation) activities. Because a site may be included on the NPL at a later date, the RWQCB staff will require PRPs to conduct RI/FS (site investigation/alternative evaluation) in a manner consistent with the NCP. In particular, Quality Assurance Project Plans (QAPPs) and Site Safety Plans will be required from the PRPs. These documents must be consistent with EPA's required format. RWQCB staff will also have oversight of day-to-day PRP activities.

Subtask E3a. PRP Quality Assurance Project Plans and Site Safety Plans ($50,971)

The RWQCB staff will require, oversee, and approve the preparation of Quality Assurance Project Plans and Site Safety Plans by the PRPs. The QAPP is a detailed plan of the sampling, analysis, and data handling aspects of a site investigation. A site safety plan describes site hazards and specifies safety procedures and personnel protection requirements.

Under this subtask, RWQCB staff will work with EPA to develop a format for the QAPP and site safety plan consistent with the NCP and the EPA program. The RWQCB format will be submitted to EPA for approval.

RWQCB staff oversight will include providing the required format and content for the plans and reviewing and approving the plans prepared by the PRPs for compliance requirements.

The equivalent of one WRC Engineer staff year will be needed for this task.

Products

The products of Subtask E3a will be Quality Assurance Project Plans and Site Safety Plans, acceptable to EPA and approved for all South Bay sites, and a summary report at the end of the year on the approval process status.

not specified, no NPL requirement

State-Budgeted Activities

The proposed staffing for Subtask E3a will be used to extend the scope of present quality assurance and safety requirements and to initiate a formal review and approval program. No State-funded effort is presently budgeted for these activities.

Cost

A detailed cost breakdown for Subtask E3a is presented in Table III-11.

Table III-11
Detailed Cost Estimate for Subtask E3a

Personnel	Staff Years	Annual Salary	Cost
WRC Engineer	1.0	26,604	$26,604
TOTAL			$26,604
Fringe Benefits			
Calculated at 30 percent of personnel costs			$7,981
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			11,486
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			200
Communication at $800/sy			800
Postage at $200/sy			200
Facility (office space) at $1,200/sy			1,200
Travel at $2,500/sy			2,500
Total General Expenses			$4,900
TOTAL COST for Subtask E3a.			$50,971

Subtask E3b. EPA Coordination ($84,118)

Under this Subtask, RWQCB staff will ensure that the RI/FS underway at South Bay sites are in compliance with the NCP. To this end, regular communication in the form of meetings, conferences, telephone calls, and written correspondence between EPA and RWQCB staff and management must occur.

Under Subtask E3b, RWQCB staff will be provided with the necessary information and access to the appropriate personnel to familiarize themselves with EPA's RI/FS process. The RWQCB staff must be familiar with the RI/FS process if they are to oversee the PRP's investigation for compliance with the NCP. The NCP consistency check is necessary since there are currently 19 proposed NPL sites and other sites in the South Bay that may become NPL sites at a later date. As mentioned at the beginning of this section, the RWQCB program will be modified slightly to insure its conformance with the NCP. These changes will require additional in-house meetings and correspondence at the RWQCB.

This subtask will require the equivalent of 1.5 staff years of a WRC Engineer and 0.25 staff years of an Office Assistant II.

Products

The product of Subtask E3b will be: Meetings, conferences, telephone calls, and written correspondence between RWQCB and EPA staff for discussion of site-specific activities and data; and, RWQCB staff attendance at training seminars to familiarize themselves with the EPA RI/FS process.

State-Budgeted Activities

The communications between RWQCB and EPA staff are for purposes directly related to the MSCA and are thus not included in anticipated State-funded activities. The familiarization with the RI/FS process referred to in this subtask relates specifically to the MSCA requirements. As such, there is no existing State-funded budget for these activities.

Cost

A detailed cost breakdown for Subtask E3b is presented in Table III-12.

Table III-12
Detailed Cost Estimate for Subtask E3b

Personnel	Staff Years	Annual Salary	Cost
WRC Engineer	1.50	26,604	$39,906
Office Assistant II	0.25	14,868	3,717
TOTAL			$43,623
Fringe Benefits			
Calculated at 30 percent of personnel costs			$13,087
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			18,833
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			350
Communication at $800/sy			1,400
Postage at $200/sy			350
Facility (office space) at $1,200/sy			2,100
Travel at $2,500/sy			4,375
Total General Expenses			$8,575
TOTAL COST for Subtask E3b.			$84,118

PROGRAM ELEMENT F:
TIER II ACTIVITIES

Tier II activities will not be funded under the first million dollars of the MSCA.

PROGRAM ELEMENT G:
TIER III ACTIVITIES

The purpose of Tier III activities is to provide a means of evaluating the long-term and regional effects of all South Bay groundwater contamination investigations and cleanup activities on the groundwater resource. The following paragraphs describe the tasks necessary to begin to evaluate these effects.

TASK G1. PROGRAM ANALYSIS AND DEVELOPMENT ($82,760)

Under this task the RWQCB staff will identify ways to evaluate the regional and long-term effects on the groundwater resource of the activities associated with groundwater contamination in the South Bay.

As Tier III activities progress, there will be a need to establish a long-term groundwater management process whereby problems can be promptly identified and new information incorporated into the program. The types of ongoing management review needs may include, but are not limited to, the following activities.

- To insure compliance with environmental laws.
- To evaluate cumulative impacts as remedial actions come on line.
- To identify, evaluate, and incorporate new standards, health advisory data, and other information that affects the protection of public health and the environment.
- Incorporation of the products from all agencies and interested parties involved with groundwater quality protection in the South Bay into the South Bay Program.
- To identify potential beneficial uses of extracted and treated water with locations, quality, and quantity changes.
- To monitor impacts and mitigative measures associated with new source surface and groundwater discharges air emissions, noise and visual effects.

One Senior WRC Engineer staff year and the equivalent of 25 percent of an Office Assistant II staff year are needed for this task.

Products

The product for Task G1 will be a report containing preliminary analysis of regional programs and data. The report will also contain recommendations for regional activities such as data interpretation and projection; coordination of groundwater activities; and, evaluation of regional remedial alternatives. Proposed work plans for recommended regional activities will be developed for possible incorporation into future cooperative agreements.

State-Funded Activities

The proposed budget for State-funded planning and basin planning activities does not include any studies or planning activities of the nature proposed under this task.

Cost

A detailed cost breakdown for Task G1 is presented in Table III-13.

Table III-13
Detailed Cost Estimate for Task G1

Personnel	Staff Years	Annual Salary	Cost
Senior WRC Engineer	1.0	40,536	$40,536
Office Assistant II	0.25	14,868	3,717
TOTAL			$44,253
Fringe Benefits			
Calculated at 30 percent of personnel costs			$13,276
Indirect Costs			
Calculated at 33.21 percent of personnel costs plus fringe benefits			19,106
General Expenses			
Calculated on an average staff year (sy) basis:			
Supplies (paper, pencils, copies, etc.) at $200/sy			250
Communication at $800/sy			1,000
Postage at $200/sy			250
Facility (office space) at $1,200/sy			1,500
Travel at $2,500/sy			3,125
Total General Expenses			$6,125
TOTAL COST for Task G1.			$82,760

TASK G2. ASSESS NEED FOR DATA MANAGEMENT SYSTEM ($10,000)

The purpose of this task is to evaluate the need for a technical data management system at the RWQCB. The RWQCB will hire a contractor to evaluate their existing data management capabilities, and existing and expected future data management needs. If additional capabilities are needed, the contractor will recommend systems and will provide a cost-benefit analysis of each.

Products

The product of Task G2 will be a report summarizing the evaluation for adequacy of the RWQCB's existing data management system. Included in this report will be recommendations and cost estimates for any changes and/or additions.

State-Funded Activities

Currently there are no State funds budgeted for the evaluation of the RWQCB's existing data management.

TASK G3. WELL PROJECTS ($191,365)

The well projects task is a series of regional activities in the South Bay to be conducted by the SCVWD. Included in the well projects are well inventories, private well monitoring, and well sealing. The EPA and SCVWD have agreed that the MSCA will, at this time, fund only site specific well inventories. The results of these inventories are the necessary basis for future well projects in the South Bay.

who's involved from SCVWD?

Task G3 is composed of several subtasks. The following paragraphs present a brief description and detailed cost breakdown for the work to be performed under each subtask.

Subtask G3a. Work Plan Preparation ($6,110)

The SCVWD will prepare a detailed work plan for target areas where well inventories are to be performed. The targets will be areas where there is a risk to public health and the environment due to the proximity of wells to known sites of contamination or groundwater plumes in the South Bay. The SCVWD will work with the RWQCB to identify the target areas. The work plan will include the following components: a description of the area to be surveyed; the equipment and staff required to perform the well inventory; the specific activities to be performed as part of the inventory; the equipment and staff required to summarize the inventory findings; and, a schedule for completing the well inventory. The SCVWD will designate a senior or other civil engineer working on a 20 percent basis to prepare the work plan for the well inventories.

Products

The product of Subtask G3a will be a work plan for conducting well inventories in the target areas.

District Funding

There are currently no SCVWD funds allocated to cover the cost of Subtask G3a.

Cost

A detailed cost breakdown for Subtask G3a is presented in Table III-14.

Table III-14
Detailed Cost Estimate for Subtask G3a

Personnel	Staff Years	Annual Salary	Cost
Senior Civil Engineer	0.05	47,500	2,375
TOTAL			$2,375
Fringe Benefits			
Calculated at 35 percent of personnel costs			$ 831
Overhead Costs			
Calculated at 110 percent of personnel cost			2,613
General Expenses			
Calculated at 5 percent of the sum of personnel, fringe benefits, and overhead costs			$ 291
TOTAL COST for Subtask G3a.			$6,110

Subtask G3b. Quality Assurance Plan/Safety Plan Preparation ($24,439)

The SCVWD will prepare a Quality Assurance and Safety Plan for all work to be performed as part of the well inventories. The contents of each of these plans are described below.

The SCVWD will prepare a Quality Assurance (QA) Plan for the sampling, analysis, and data handling aspects of the well inventories. Overall QA objectives should be consistent throughout their South Bay involvement. The plan must contain the following elements:

- Project description
- Project organization and responsibility
- Quality assurance targets for measurement data
- Data reduction, validation, and reporting
- Specific routine procedures used to assess data precision, accuracy, and completeness
- Corrective action

In summary, the QA Plan will include a detailed description of all methods to be used in conducting the well inventories. Also, the QA Plan will present in detail all field operating procedures to be used during the inventories.

The SCVWD will prepare a safety plan for field activities to be performed as part of the well inventories. The purpose of the safety plan is to address the hazardous nature of the operations, including accident potential, and develop safe operating procedures and protective clothing regimes to minimize the potential for exposures to hazardous materials. The plan must be developed consistent with the work to be performed and must comply with:

- Occupational Health and Safety Manual
- EPA Interim Standard Operating Safety Procedures and other EPA guidance
- Site conditions
- EPA Order 1440.0--Respiratory Protection
- EPA Order 1440.3--Health and safety Requirements for Employees Engaged in Field Activities

The SCVWD will designate one Senior Civil Engineer or other at 20 percent time to prepare these plans.

Products

The products of Subtask G3b will be a Quality Assurance Plan and Safety Plan for well inventories that will be performed under Subtask G3c.

District Funding

There are currently no SCVWD funds allocated to cover the cost of Subtask G3b.

Cost

A detailed cost breakdown for Subtask G3b is presented in Table III-15.

Table III-15
Detailed Cost Estimate for Subtask G3b

Personnel	Staff Years	Annual Salary	Cost
Senior Civil Engineer	0.20	47,500	$9,500
TOTAL			$9,500
Fringe Benefits			
Calculated at 35 percent of personnel costs			$ 3,325
Overhead Costs			
Calculated at 110 percent of personnel cost			10,450
General Expenses			
Calculated at 5 percent of the sum of personnel, fringe benefits, and overhead costs			$ 1,164
TOTAL COST for Subtask G3b.			$24,439

Subtask G3c. Well Inventory ($148,596)

Thousands of wells have been constructed in the South Bay throughout Santa Clara County's history of groundwater production. It is estimated that there are 4,000 to 5,000 active wells and another 3,500 to 5,000 abandoned (inactive) wells in the County. An estimated 1,000 active and abandoned wells are within the areas of known toxic spills. The locations of all of the wells in the South Bay are not known at this time. Because existing inactive and active wells are potential conduits for contaminant migration, it is necessary to identify the location of these wells in the South Bay. A systematic method for identifying the locations and conditions of inactive and active wells in the South Bay will be performed under this subtask as defined in the work plan developed under Subtask G3a.

The SCVWD will designate the equivalent of 25 percent of one Associate Civil Engineer staff year to coordinate the well inventory activities. The SCVWD will also use the equivalent of 0.45 and 1.45 staff years of an Engineering Technician I and an Engineering Aide I, respectively. EPA's Environmental Monitoring Systems Laboratory (EMSL) in Las Vegas, Nevada will assist in the interpretation of aerial photographs. The United States Geological Survey (USGS) in Denver, Colorado will provide instruction in the use of the Proton Magnetometer. Both the EMSL's and USGS's contribution will be funded separately from the MSCA. Two hand-held proton magnetometers will be purchased to assist in locating abandoned wells.

Products

The products of Subtask G3c will be summary reports for each of the well inventories conducted. The contents of the reports will be outlined in the work plans prepared for Subtask G3a.

District Funding

There are currently no SCVWD funds allocated to cover the cost of Subtask G3c.

Cost

A detailed cost breakdown for Subtask G3c is presented in Table III-16.

Table III-16
Detailed Cost Estimate for Subtask G3c

Personnel	Staff Years	Annual Salary	Cost
Associate Civil Engineer	0.25	41,000	$10,250
Engineering Technician I	0.40	29,000	11,600
Engineering Aide I	1.45	21,550	$31,248
TOTAL			53,098
Fringe Benefits			
Calculated at 35 percent of personnel costs			$18,584
Overhead Costs			
Calculated at 110 percent of personnel cost			58,408
General Expenses			
Calculated at 5 percent of the sum of personnel, fringe benefits, and overhead costs			$ 6,506
Magnetometers (2)			12,000
TOTAL COST for Subtask G3c.			$148,596

Subtask G3d. Project Management ($12,220)

The SCVWD will designate a project manager to coordinate the MSCA-funded well projects. The duties of the project manager will include:

- Well projects coordination
- Staffing
- Progress reporting
- Quality assurance and safety
- Interagency meetings.

The SCVWD will designate a Senior Civil Engineer at a staffing level of 10 percent as project manager.

Products

The product of Subtask G3d is the successful completion of the well projects task funded by the MSCA.

District Funding

There are currently no SCVWD funds allocated to cover the cost of Subtask G3d.

Cost

A detailed cost breakdown for this Subtask G3d is presented in Table III-17.

Table III-17
Detailed Cost Estimate for Subtask G3d

Personnel	Staff Years	Annual Salary	Cost
Senior Civil Engineer	0.10	47,500	$4,750
TOTAL			$4,750
Fringe Benefits			
Calculated at 35 percent of personnel costs			$1,663
Overhead Costs			
Calculated at 110 percent of personnel cost			5,225
General Expenses			
Calculated sy 5 percent of the sum of personnel, fringe benefits, and overhead costs			$ 583
TOTAL COST for Subtask G3d.			$12,220

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APPENDIX A

205j Site List

On Going (OG) Study Sites

Map	#	City	Facility	Address
OG	1	SV	AMD - Bldg. 901	901 Thompson Pl.
	2	SV	Signetics Corp.	811 E. Arques Ave.
	3	SV	AMD - Bldg. 915	915 DeGuigne Dr.
	4	SV	MMI	1165 E. Arques Ave.
	5	SC	NSC	2900 Semiconductor Dr.
	10	SJ	Fairchild	101 Bernal Rd.
	11	SJ	IBM	5600 Cottle Rd.
	12	SV	UTC	1050 E. Arques Ave.
	13	SV	Signetics Corp.	740 Kifer Rd.
	14	SV	Signetics Corp.	860 Kifer Rd.
	15	SC	Memorex Corp.	1200 Memorex Dr.
	16	SC	Intel-Magnetics	2880 Northwestern Pwky.
	17	SC	Intel-SC3	3000 Oakmeed Pkwy.
	18	SC	Dysan	5440 Patrick Dr.
	19	SC	Dysan	5200 Patrick Dr.
*	20	SJ	SCCT	2240 S. 7th St.
	22	SC	MMI	2175 Mission College Blvd.
	23	SC	Fairchild	3105 Alfred St.
	27	SV	Westinghouse	401 E. Hendy Ave.
	30	SV	Circo	940 Hamlin Ct.
+	31	SV	Signetics Corp.	305 Mathilda Ave.
+	32	SC	Signetics Corp.	3625 Peterson Way
+	33	SC	Signetics Corp.	3600 Tannery Way
	36	SC	Monsanto	2710 Lafayette St.
	38	SV	Verbatim Corp.	360 N. Pastoria Ave.
	41	SJ	Van Waters & Rogers	2256 Junction Ave.
	43	SC	Precision Mono	1500 Space Park Dr.
	47	SV	Data General	433 N. Mathilda Ave.
	49	SC	Synertek	3050 Coronado Blvd.
	50	SC	~~Syner~~tek	3001 Stender Way
	51	SC	Technical Coatings	1000 Walsh Ave.
	53	SC	AMI	3800 Homestead Rd.
	54	SV	Intersil	1276 Hammerwood Ave.
	55	SV	Xidex	305 Soquel Way
	56	SV	Zymos	477 N. Mathilda Ave.
	57	SV	TRW	825 Stewart Dr.
	58	SV	Exar-Integrated	750 Palomar Ave.
	61	SJ	Magnex Corp.	6850 Santa Teresa Blvd.
	63	SC	Spectra Physics	2905 Stender Way
	68	SJ	Solvent Service	1021 Berryessa Rd.
	69	SV	Precision Media	1262 N. Lawerence Station Rd.
	70	SV	KTI Chemicals	1120 Sonora Ave.
	71	SC	Pacific Nursery	1015 Martin Ave.
	75	SV	Advanced LSI	639 N. Pastoria Ave.
	84	SJ	Lorentz Barrel & Drum	1515 S. 10th St.
	85	SC	Applied Materials	3050 Bowers Ave.

Map	#	City	Facility	Address
	86	SV	Ampex Corp.	728 San Aleso
	87	SV	Hewlett Packard	974 E. Arques Ave.
	88	SC	Magnetic Peripheral	3333 Scott Blvd.
	90	SC	Avantek Inc.	3175 Bowers Ave.
*	92	SV	Signetics Corp.	730 Evelyn Ave.
+	93	SV	Signetics Corp.	897 Stewart Dr.
+	94	SV	Signetics Corp.	848 Stewart Dr.
+	95	SV	Signetics Corp.	830 Stewart Dr.
-	96	SJ	UTC Coyote Center	Sta. 0706, P.O. Box 358, SV

Note:

Investigation of facility status for ranking sites in cities other than San Jose (SJ), Santa Clara (SC), or Sunnyvale (SV) will be completed in Part II of the 205J Study.

Legend:

* = Insufficient information to document facility status.
+ = Included in Signetics Corp., 811 E. Arques Avenue groundwater monitoring program
- = Site located outside study area.

No Contamination (NC) Study Sites

Map	#	City	Facility	Address
NC	2	SC	Owens Corning	960 Central Expy
*	4	SC	Hewlett Packard	5301 Stevens Creek Blvd.
*	8	SV	Micromask	695 Vaqueros Ave.
	9	SC	Tandy	1600 Memorex Dr.
*	11	SJ	K & H Finishing	2302 Trade Zone Blvd.
*	12	SJ	Qume	2350 Qume Dr.
	13	SJ	IBM	2159 S. 10th St.
*	14	SJ	Sealex	582 Stockton Ave.
	16	SC	STC Computer	3450 Central Expy.
	23	SV	Toshiba	1220 Midas Way
	27	SJ	San Jose Graphics	696 Trimble Rd.

Legend:

* = Insufficient information to document facility status.

Source:

Assessment of Contamination from Leaks of Hazardous Materials in the Santa Clara Groundwater Basin 205j Report-Draft, February 1985.

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No Further Action (NA) Study Sites

Map	#	City	Facility	Address
NA	2	SV	Applied Technology	645 Almanor Ave.
	4	SJ	Burke Industires	2049 Senter Rd.
	5	SJ	IMP Corp.	2830 N. 1st St.
	6	SC	Sperry Univac	3300 Scott Blvd.
*	7	SJ	Shell Oil	2165 O'Toole Ave.
	8	SJ	Economics Lab	640 Lenfest Rd.
	9	SV	Amdahl	1250 E. Arques Ave.
	12	SV	Bell Industries	1161 N. Fairoaks Ave.
*	14	SV	Memotronics	1058 W. Evelyn Ave.
	15	SJ	Safe-Way Chemical	909 Stockton Ave.
	17	SC	Container Corp.	2500 De La Cruz Blvd.
	19	SJ	U.S. Cellulose	520 Parrot St.
	22	SC	Dysan Corp	5301 Patrick Henry Dr.
	25	SJ	Hewlett Packard	350 W. Trimble Ave.
	65	SJ	DAP Inc.	530 Marburg Way

Legend:

* = Insufficient information to document facility status.

APPENDIX B

Comparison of EPA and
Regional Board Site
Investigation and Cleanup
Procedures - Final Report

COMPARISON OF EPA AND REGIONAL BOARD SITE INVESTIGATION AND CLEANUP PROCEDURES - FINAL REPORT

August 6, 1985

SFR102/029

CONTENTS

I. EXECUTIVE SUMMARY

The South Bay Program is a coordinated interagency remedial program developed to protect the groundwater resource of the South San Francisco Bay Area (South Bay). The Environmental Protection Agency (EPA) Region 9 and the San Francisco Bay Regional Water Quality Control Board (Regional Board) are major participants in the Program. To meet the objectives of the South Bay Program, including accelerated cleanup of all South Bay sites, EPA and the Regional Board need to understand both agencies' established procedures for conducting site investigations and determining cleanup strategies. In addition, because EPA is funding some Regional Board South Bay Program activities, EPA has identified a need to determine how the Regional Board procedures correspond to those required under the National Contingency Plan (NCP) and EPA program policy and guidance documents.

This report presents the findings of a study conducted to compare the site investigation and cleanup procedures used by EPA and the Regional Board to address uncontrolled hazardous substance sites. The objectives of the study were to 1) identify procedures used by EPA and the Regional Board, 2) compare the two procedures, identifying differences and similarities, 3) identify changes to make Regional Board procedures conform to those of EPA.

The comparison showed that steps followed in each agency procedure are similar. The major differences are in planning and approval of site investigation activities, in following specific feasibility study procedures, and in the formalization of community involvement. Table 1 provides a summary of agency differences in the site investigation and cleanup procedure steps identified in this study.

Several sources were used to identify the procedures used by the two agencies: laws, regulations, guidance documents, informal written procedures, and interviews with key agency representatives. A listing of information sources is provided in the Appendix.

The remainder of this report is divided into three parts. Part II outlines EPA investigation and cleanup procedures, Part III outlines the Regional Board procedures, and Part IV presents a comparison of the two procedures.

Table 1
SUMMARY OF AGENCY DIFFERENCES

STEP[a]	DIFFERENCES	CHANGES TO BRING REGIONAL BOARD INTO CONFORMANCE WITH NCP[b]
A. Discovery	No functional differences[c]	
B. Site Evaluation (Preliminary Assessment, Site Inspection, and NPL Determination)	EPA conducts sampling. Dischargers, rather than the Regional Board, conduct sampling.	o Sampling by Regional Board rather than discharger during site evaluation. (Only if sampling existing wells or easily accessible soil.)
C. Removals	No functional differences[c]	
D. Site Investigation (Remedial Investigation)	EPA requires sampling plan, QA plan, and site safety plan. Regional Board does not require those specific plans, however, some of the detail that would be in an EPA sampling plan may be provided in the work plan.	o Require detailed sampling plan, QA plan and site safety plan. Prepare guidelines that conform with the NCP to instruct dischargers in preparing these plans.
E. Feasibility Study	EPA requires initial screening of all possible alternatives to come up with smaller list of alternatives to be evaluated in detail. Regional Board requires the discharger to present only the final alternatives that were evaluated.	o Require dischargers to document all alternatives initially considered and reasons for eliminating any.

STEP	DIFFERENCES	CHANGES TO BRING REGIONAL BOARD INTO CONFORMANCE WITH NCP[a]
	EPA requires alternatives in five categories (if possible) be developed and evaluated. The categories are: removal to off-site facility, exceeds standards, attains standards, does not attain standards but protects health and environment, and no action. Regional Board requires alternatives in three categories be developed and evaluated. The categories are: maintenance of existing water quality, allowing some degradation but no loss of beneficial use, and allowing degradation to point of loss of beneficial use.	o Change mid-range alternatives required to: - allows degradation but exceeds standards - allows degradation but attains standards - does not attain standards but no loss of beneficial use
F. Selection of Remedy	No functional difference[c]	
G. Community Involvement	EPA requires a site specific community relations plan, a public meeting to present the FS, and a document summarizing major issues raised by the public during remedial action selection and how they were addressed. Regional Board does not have these requirements.	o Prepare community relations plans o Hold public meeting specifically to present FS results o Prepare document to address publicly raised issues

[a] EPA term is in parentheses if different.

[b] Assuming all NCP steps and procedures are ultimately required.

[c] Minor differences may exist (e.g., terminology) which have no impact on compliance with the NCP.

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II. EPA PROCEDURES

A. OVERVIEW

This part of the report outlines the EPA procedures established for the investigation and cleanup of hazardous substance sites that pose a threat to human health, welfare, or the environment. The procedures encompass activities ranging from site discovery through selection of a remedy. Sources consulted for this information include: Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA); National Oil and Hazardous Substances Pollution Contingency Plan (NCP) Proposed Rule February 12, 1985; Guidance on Remedial Investigations Under CERCLA, May 1985; and Guidance on Feasibility Studies Under CERCLA, April 1985. The NCP proposed rules were consulted rather than the existing rules because current guidance is consistent with the proposed rules. In addition, the proposed rules do not significantly change the procedures or steps involved in site remedial actions.

The steps of the EPA site investigation/cleanup procedure are shown in Figure 1. The following sections describe the steps.

B. SITE EVALUATION PHASE

The purpose of this phase is to further categorize the nature of an identified release and to collect data as required to determine whether a release should be placed on the National Priorities List (NPL), a listing of known or threatened releases that serves as a basis for allocation of Federal fund resources. (The term "release" refers to a release or substantial threat of release of a hazardous substance, contaminant, or pollutant into the environment.)

DISCOVERY AND NOTIFICATION OF RELEASE

Releases are discovered through several different means including:

- Notification of the National Response Center or the EPA in accordance with CERCLA requirements
- Investigation by government officials in accordance with CERCLA or other state authority

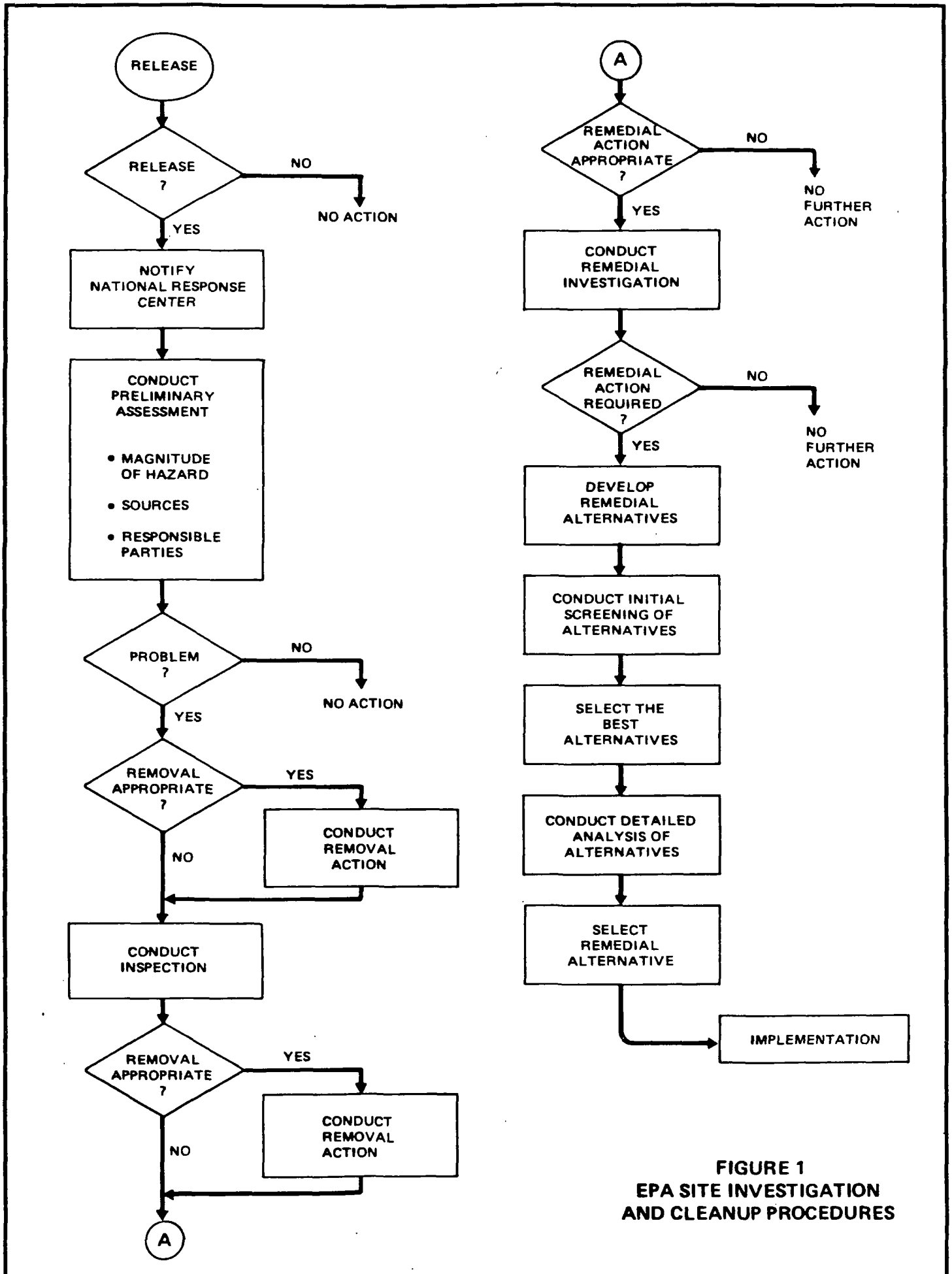


FIGURE 1
EPA SITE INVESTIGATION AND CLEANUP PROCEDURES

- Notification by Federal or State permit holder when required by the permit

- Inventories or random observations by government agencies or the public

PRELIMINARY ASSESSMENT

Upon notification of a release, a preliminary assessment (PA), based on readily available information, is conducted. Information gathered during a PA includes:

- Identification of the source and nature of the release

- Preliminary evaluation of the threat to public health

- Evaluation of the factors needed to determine if removal is necessary (see Section C. REMOVAL)

- Determination of any non-federal party response activities underway or already implemented

- Any other readily available information related to the release

The PA is terminated when the lead agency determines:

- The assessment is completed

- There is no release or threat of release

- The amount, quantity, and concentration released does not warrant Federal response

- The party responsible for the release or some other party is providing appropriate response

If not terminated, the PA can result in one of three outcomes:

- A removal action is required (removal actions are discussed in Section II.B.)

- There is no problem resulting from the release and, therefore, no further action is required

- Removal actions are not required, but remedial actions may be necessary (proceed to site inspection)

SITE INSPECTION

If the PA determines that remedial actions may be necessary, a site inspection (SI) is conducted. The purpose of a site inspection is to assess whether or not a release poses a threat and to collect data to determine if the release should be added to the NPL for remedial action. The site inspection consists of a visual inspection of the site with the collection of samples if appropriate.

NPL DETERMINATION

From the results of the PA and SI, the release is ranked using the established Hazard Ranking System. The resulting score determines if the release will be proposed for addition to the NPL. If the release is placed on the NPL, remedial action planning will proceed with federal funds at a time determined by funding priorities, or with responsible party (RP) funds if the RP is willing and able to conduct the required activities in a timely manner. If the release is not placed on the NPL, remedial action is directed by state and/or local agencies.

C. REMOVAL

The term "removal" refers to the removal of released substances or their threat as necessary to prevent, minimize, or mitigate damage to public health or welfare or the environment. A removal activity can take place at any time during the investigation process when it is determined appropriate and necessary. For example, a removal could occur after the PA determines that an immediate threat to public health exists, after the SI discovers an immediate threat that was not observed in the PA, or later during the remedial investigation phase when an immediate threat is discovered.

When determining the necessity of removal action for a particular release, the following factors are considered:

- Actual or potential exposure to hazardous substances by nearby populations, animals, or the food chain
- Threat to drinking water supplies or sensitive ecosystems
- Drums, barrels, tanks, etc. that may pose a threat of release
- Highly contaminated surfaces or near-surface soils
- Weather conditions that may contribute to a release threat
- Threat of fire or explosion

If removal is considered necessary, it is carried out as soon as possible.

Examples of removal actions are:

- Fences, warning signs, or other security or site control precautions
- Drainage controls
- Capping of contaminated soil, or sludges
- Removal of highly contaminated soils from drainage areas
- Removal of drums, barrels, tanks or other bulk containers of hazardous substances
- Provision of alternative water supply

D. REMEDIAL ACTION

Remedial actions are responses to releases consistent with a permanent remedy to prevent or minimize release of hazardous substances, pollutants, or contaminants. The remedial action phase occurs after the PA and SI have indicated that remedial action is needed, the release has been included on the NPL, and federal funding has been authorized. If a responsible party is responding to the release, however, the remedial action phase is initiated as soon as remedial action is determined or suspected to be necessary.

REMEDIAL INVESTIGATION

A Remedial Investigation (RI) is conducted by the EPA or responsible party and includes sampling, monitoring, and exposure assessments, as necessary, to determine the necessity for and proposed extent of remedial action.

Scoping

The EPA examines the information available at this point and considers the type of response that may be necessary to remedy the release. This scoping serves as a mechanism for establishing remedial investigation goals and objectives. Site characterization activities, exposure assessment needs, and funding needs are all outlined during the scoping process.

Work Plan

After RI goals and objectives have been established in the project scoping effort, the lead agency or responsible party prepares a work plan. This plan describes the investigation

activities planned to characterize the site. Activities typically include, but are not limited to, sampling, monitoring, literature reviews, and health effects studies.

Sampling Plan

Sampling activities must be carried out in accordance with a written plan. The objectives of a sampling plan are to provide:

- Specific field work guidance
- A mechanism for planning and approving site activities
- A basis for estimating field work costs
- A basis for assessing the necessity and sufficiency of sampling activities
- A basis for assessing the comparability and compatibility between site activities

At a minimum, the sampling plan includes:

- Investigation objectives
- Site background
- Analysis of existing data
- Analytes of interest
- Sample types
- Map of sample locations
- Sample frequency
- Analytical procedures
- Operational plan/schedule
- Cost estimate

Quality Assurance Project Plan

In addition to the sampling plan, a quality assurance (QA) project plan is prepared and approved prior to commencement of field work. The QA plan presents the policies, organization, objectives, and specific QA and quality control (QC) activities designed to achieve the data quality goals of the specific project. Elements to be addressed in the QA plan include:

- Project description
- Project organization and responsibility
- QA/QC objectives for measurement data
- Sampling procedures

- o Sample custody
- o Calibration procedures and frequency
- o Analytical procedures
- o Data reduction, validation, reporting
- o Internal QC checks and frequency
- o Performance and system audits and frequency
- o Preventive maintenance procedures and schedule
- o Specific routine procedures for assessing data precision, accuracy and completeness of specific measurement parameters
- o Corrective action
- o QA reports to management

Health and Safety Plan

A written site health and safety plan is required for all field activities. The plan contains an assessment of the site hazards and specific procedures to protect workers from those hazards. The plan must be developed consistent with the work to be performed and must comply with Occupational Health and Safety laws and regulations and EPA Standard Operating Safety Procedures and other EPA guidance.

Remedial Investigation Report

A written RI report is required to present and summarize the results of the RI activities.

FEASIBILITY STUDY

A Feasibility Study (FS) is required to develop and evaluate remedial action alternatives utilizing the data developed during the RI.

Development of Alternatives

Remedial action alternatives are developed that fall into each of the following categories:

1. Alternatives specifying offsite storage, destruction, treatment, or secure disposal of hazardous substances at a facility approved under RCRA and in compliance with other applicable EPA standards.

2. Alternatives which attain all relevant and applicable Federal public health and environmental standards, guidance, and advisories.

3. As appropriate, alternatives that exceed all relevant and applicable Federal public health and environmental standards, guidance, and advisories.

4. Alternatives that meet the CERCLA goal of preventing or minimizing present or future migration of hazardous substances and protecting human health and the environment, but do not attain the relevant and applicable standards.

5. No action alternative.

If a category is excluded because an alternative cannot be developed for it, the reason is documented.

Initial Screening

Remedial alternatives are screened based on environmental and public health criteria. This is followed by an order-of-magnitude cost screening. When alternatives are eliminated from further consideration, the rationale for exclusion is documented.

Detailed Analysis of Alternatives

Alternatives remaining after the initial screening are refined and more fully developed. A narrative description of each alternative is prepared. Each alternative must undergo a detailed analysis. Items to be covered in the analysis include: technical evaluation; institutional issues; public health evaluation; environmental assessment; and cost analysis.

Feasibility Study Report

A written FS report is required to summarize the data developed and to document the alternative remedial actions screening and detailed analysis process.

SELECTION OF REMEDY

The lead agency selects a remedial action based on the feasibility study results and public input. The agency is directed by the NCP to choose a remedial action considering cost, technology, reliability, administrative concerns, and relevant effects on public health, welfare, and the environment. Primary consideration is given to alternatives that attain or exceed applicable or relevant Federal public health or environmental standards. If no Federal or State standards

exist, primary consideration is given to alternatives that effectively mitigate and minimize threats to public health, welfare, and the environment.

A final alternative that does not attain existing standards may be selected if all alternatives that do meet the standards fall into one of the following categories:

- Financial restrictions due to fund balancing (for fund financed responses only)
- Technically impractical
- Environmental impacts are unacceptable
- The fund is unavailable, there is strong public interest, and litigation is not expected to result in a desired remedy.

E. COMMUNITY RELATIONS

A formal community relations plan is required for removals and remedial actions. The plan includes communication activities undertaken during response actions and a public comment period on the alternatives analysis. For immediate responses, a formal plan is not necessary, but a spokesperson is designated to inform the public of activities taking place.

A document summarizing major issues raised by the public and how they were addressed is included in the decision document approving a remedial action. When responsible parties take remedial action, a public comment period and the addressing of comments received is also required.

III. REGIONAL BOARD PROCEDURES

This part of the report outlines Regional Board procedures for investigation and cleanup of hazardous substance sites. The procedure begins with site discovery and continues through selection of a remedial action. Sources of information on Regional Board procedures included: staff guidelines and memorandums; interviews with key Regional Board staff; and State Water Resources Control Board (State Board) interim guidance.

A. STATE BOARD GUIDANCE

OVERVIEW

On March 15, 1985, the State Board adopted "Interim Guidance for Hazardous Substance Site Cleanup". This document sets forth administrative and technical protocol to be used as guidance by the State Board, the Regional Boards, and other regulatory agencies in the cleanup of hazardous material sites. The guidance document addresses:

- Responsibility of each agency in site investigation and cleanups
- Process for developing and evaluating cleanup alternatives
- Process for incorporating public participation in the selection of cleanup methods and levels
- Methodology for selecting site specific hazardous substance remedial actions and cleanup levels

The State Board plans to revise the document to incorporate comments received during recent review/comment workshops. At the time of this writing, a time schedule for the revision had not been set.

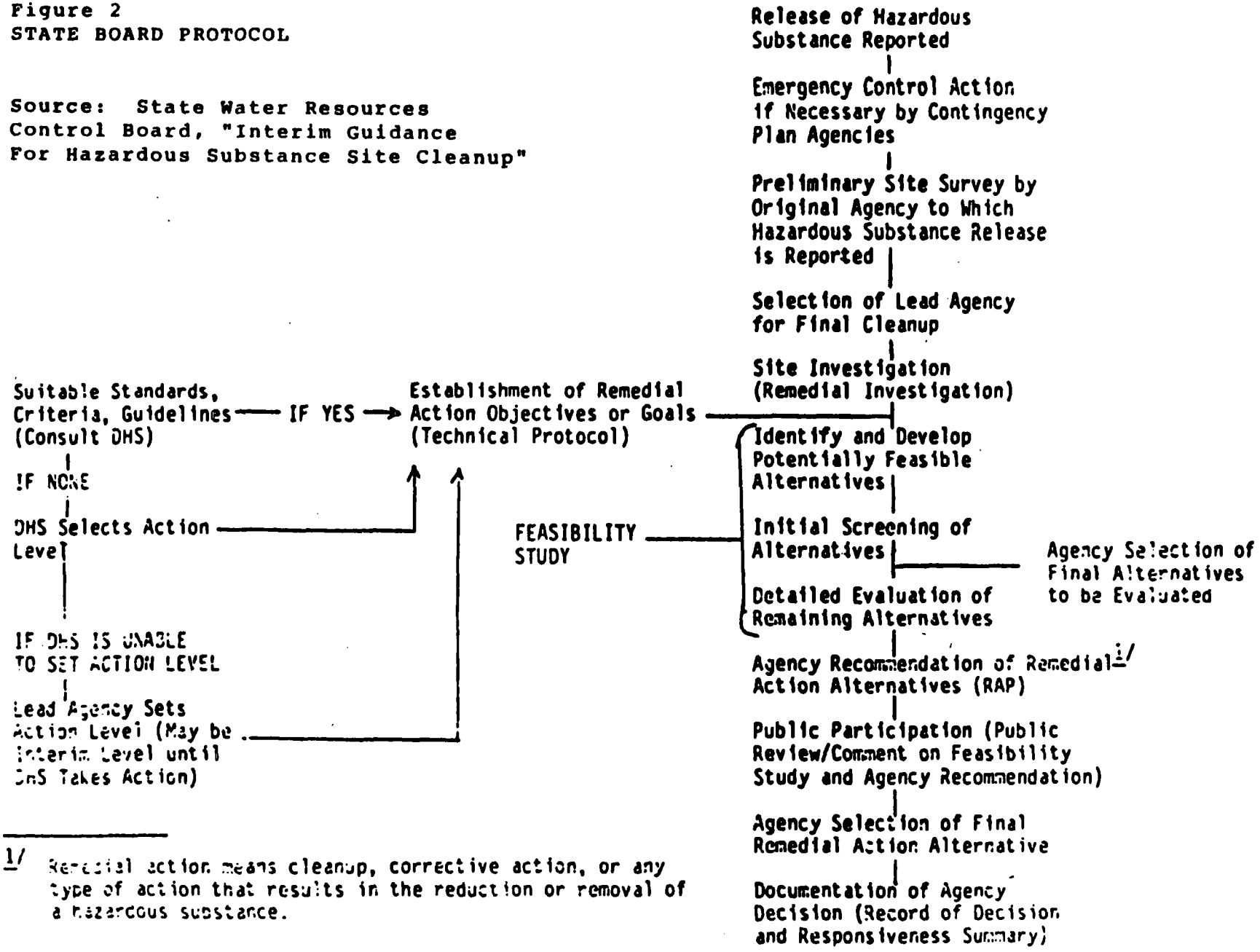
As shown in the flow chart in Figure 2, the major steps of the State Board process are:

1. Release notification/emergency response - A hazardous substance release is reported to a local, state, or federal agency. Emergency control actions are taken if the release poses an imminent danger to human health and the environment. (Generally, local agencies respond to emergency situations.)

2. Preliminary site survey - The notified agency attempts to define the type of problem and involve

Figure 2
STATE BOARD PROTOCOL

Source: State Water Resources Control Board, "Interim Guidance For Hazardous Substance Site Cleanup"



1/ Remedial action means cleanup, corrective action, or any type of action that results in the reduction or removal of a hazardous substance.

other appropriate agencies. A preliminary survey of the site is prepared to determine: hazardous substances involved; type of release (e.g., leak, spill, etc.); environmental media affected; and size of release. A lead agency is designated to be responsible for site investigation and cleanup.

3. Site investigation - The site is characterized and exposure potential is evaluated. The type of release and the lead agency's own internal procedure dictates the details of the site investigation.

4. Feasibility study (FS) - The FS consists of: development of alternative remedial actions; establishment of remedial action goals and objectives; initial screening of alternatives; and detailed evaluation of remaining alternatives.

5. Selection of alternative - A remedial action alternative is selected by the lead agency based on FS alternative evaluations and public input. The decision is formally documented.

The procedure set forth in the State Board guidance document was based upon EPA's procedure and conforms to the NCP. Because it is only guidance, the Regional Boards are not required to and do not necessarily follow it.

FEASIBILITY STUDY

The State Board guidance describes the steps of the feasibility study as follows.

Establishment of Remedial Action Objectives

The first step in a FS is to determine remedial action objectives or goals based on results of the site investigation and established cleanup levels. The interim guidance document outlines procedures for establishment of cleanup levels for surface and groundwater. The levels are established by the California Department of Health Services (DHS) or the lead agency to protect the "most sensitive biological receptors." More stringent levels than those established may be required when technically and economically feasible to attain.

Surface and groundwaters are to be cleaned to whatever following level is necessary to protect existing or potential beneficial uses:

1. Levels equal to or exceeding State and Federal drinking water standards, DHS action levels, EPA/National Academy of Sciences (NAS) health

advisories, or national ambient water quality criteria for those substances listed.

2. For substances not covered by (1.), levels equal to or exceeding the listed priority pollutants at the 10(-6) cancer risk level or the chronic non-cancer level based upon daily intake.

3. For substances not covered by (1.) or (2.), levels supported by scientific literature or studies at the site. DHS sets this level.

Soils are to be cleaned to levels such that potential leaching or runoff of hazardous substances will not exceed levels set for surface and/or groundwater.

Exemptions to these prescribed cleanup levels exist to take into account detection limits, background contaminant levels and excessive cleanup costs.

Develop Alternatives

The next step in the FS is identification and development of a range of remedial action alternatives with the site specific objectives as their goal. Alternatives are identified that fit into each of five categories which mirror the categories established by EPA described in Section II.D.

Initial Screening and Selection of Final Alternatives to be Evaluated

The identified alternatives are screened against technical, economic, and environmental criteria. Obviously infeasible alternatives are thrown out. The lead agency then selects the final list of remedial alternatives to be evaluated in detail and, if possible, at least one alternative from each of the five categories is included in the final list.

Detailed Evaluation

The remaining alternatives are evaluated in detail. The evaluation includes technical considerations, estimated costs, environmental impacts, and public concerns.

REMEDIAL ACTION SELECTION

The agency may recommend a remedial action based on results of the FS. The alternative should be one that attains or exceeds standards unless prevented by site circumstances. The recommendation and its basis are formally documented . A draft cleanup plan is written, fully describing the recommended alternative.

The public participation process is used in selecting the final remedial action. The draft cleanup plan is circulated for public comment and one or more meetings are held to discuss the site and the proposed cleanup. The lead agency addresses all substantive comments received in a responsiveness summary. The final plan is then adopted and implemented.

B. REGIONAL BOARD REQUIREMENTS AND PRACTICES

The Regional Board has been overseeing groundwater contamination investigations in the South Bay for several years. During this time the agency has developed procedures, both formal and informal, for managing the investigations and selecting remedial actions for implementation. In general, the Regional Board's process fits into the framework recently set up by the State Board in the interim guidance document. This section describes the specific procedures in use at the Regional Board. A flow chart of the Regional Board procedure is provided in Figure 3.

DISCOVERY

The Regional Board is made aware of hazardous substance releases in a number or different ways. These include, but are not limited to:

- Owners of underground solvent storage tanks submitting results of mandatory subsurface investigations
- Leaks discovered and reported with implementation of local underground tank ordinances
- Calls from the public reporting suspected releases
- Calls from businesses/industries reporting releases
- Reports from other agencies regarding known or suspected releases

In addition, The Porter-Cologne Water Quality Control Act requires any person discharging waste that could affect the quality of the waters of the state to file a report of the discharge with the appropriate regional board.

SITE INVESTIGATION

The Regional Board handles site investigations on a case-by-case basis within a general framework. That framework is made up of three steps:

1. Confirm that there is reason to believe a release has occurred

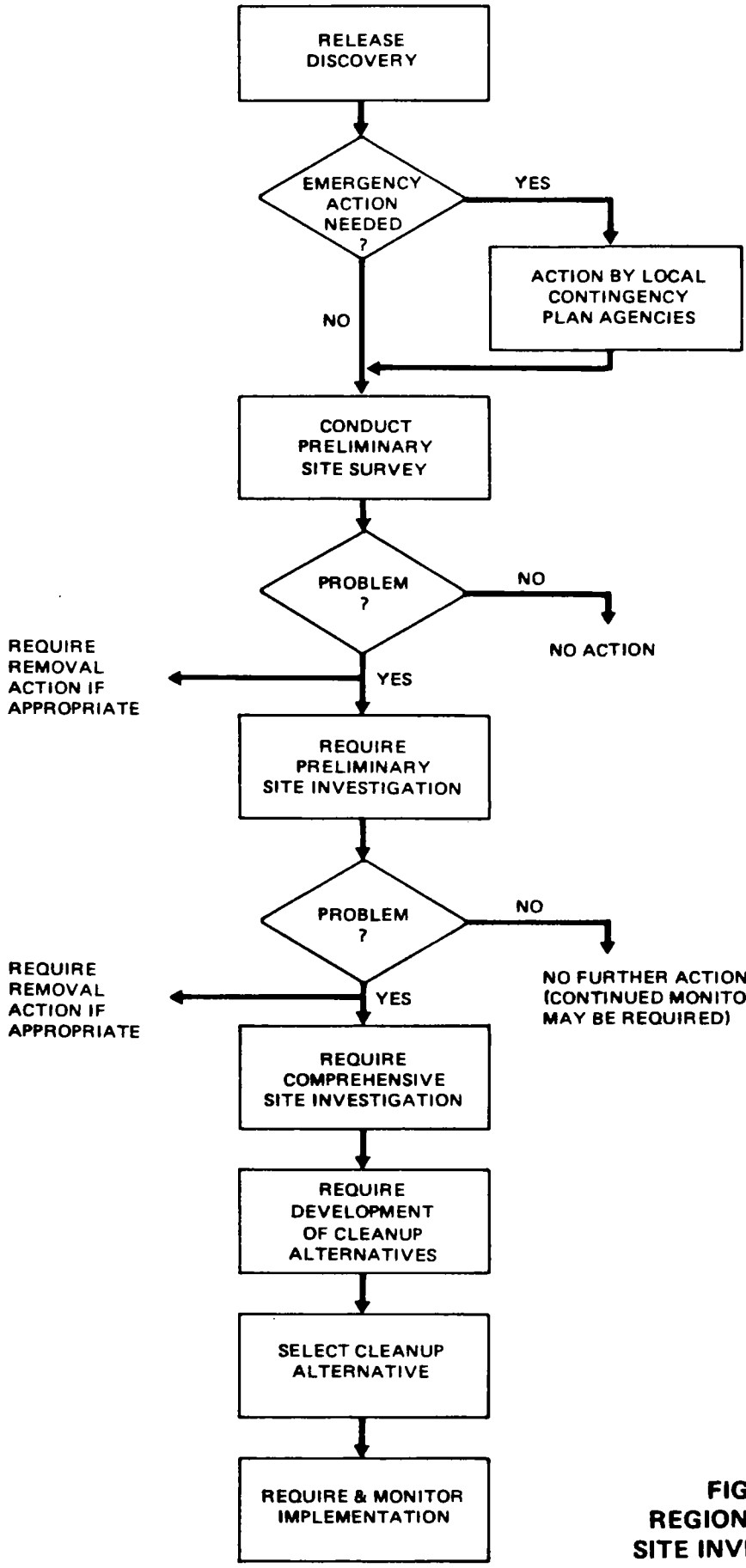


FIGURE 3
REGIONAL BOARD
SITE INVESTIGATION
AND CLEANUP PROCEDURES

2. If yes, then confirm that a release has occurred through soil and groundwater sampling and analysis

3. If yes, define the vertical and lateral extent of contamination.

A specific case may begin at any of these steps depending on what is known about the case at the time it is brought to the attention of the Regional Board. For purposes of this report, the three steps have been termed: 1) Preliminary Site Survey, 2) Preliminary Site Investigation, and 3) Comprehensive Investigation. They are further discussed in the following paragraphs.

Preliminary Site Survey

When the Regional Board becomes aware of a potential release, a staff person is assigned to look into the report, gathering readily available information to confirm that there is reason to believe a release has occurred. This often involves a site inspection to gather pertinent information such as: chemicals in use, suspected sources, surrounding land use, and site layout. The inspection is documented in a compliance inspection report.

Preliminary Site Investigation

If there is reason to believe that a release has occurred, the Regional Board requires the suspected discharger to conduct a preliminary site investigation, sometimes referred to as a Phase I investigation. The purpose of this investigation is to confirm, through soil and groundwater sampling and analysis, that a release has occurred. The Regional Board's "General Guidelines for Subsurface Investigations" specify investigation procedures such as: number of monitoring wells, depth and construction of wells, soil and groundwater sampling, laboratory analysis and approved laboratories, and report filing. The Regional Board determines whether or not the investigation results indicate a release has occurred. If the results are positive, the next step begins. If negative, the Regional Board may still require continued periodic monitoring of groundwater before the case is closed.

Comprehensive Investigation

In this step the Regional Board requires the discharger to define the vertical and lateral extent of contamination in the soil and/or groundwater. This step has been referred to as Phase II. A work plan is required in which the discharger describes the scope of work proposed. The Regional Board must approve the plan before the work begins. When the work is completed the results must be presented in the form of a report to the Regional Board. In many cases, this step of

the investigation is carried out in more than one stage. A workplan is submitted for the first contamination definition stage. The plan is approved, the work completed, and a report is submitted. Using the results obtained in the first stage, the next stage of investigation is planned and proposed in another work plan submitted to the Regional Board. This continues until the extent of contamination is sufficiently defined as determined by the Regional Board.

REMOVALS

Removals (an EPA term) are actions taken to remove a release or threat of release. The Regional Board may require removal actions prior to determination of a final remedy if a release poses an immediate threat to public health or the environment. The Regional Board requires the discharger to submit a written proposal of the action to be taken. Because these actions are often emergency in nature, approval to begin may be given by the Executive Officer rather than the Board. Examples of removal actions are: tank and/or soil removal, containment by groundwater pumping, and public well closures with alternative water supply arranged.

SITE CLEANUP

The Regional Board requires dischargers to develop at least three cleanup alternatives covering each of the following categories:

1. Maintain Existing (i.e., Background) Water Quality - This alternative implies that modification of the chemical, physical, and/or biological properties of existing water is prohibited. Therefore, all discharged hazardous materials would have to be prevented from entering groundwater or removed from groundwater.

2. Allow water quality degradation without affecting beneficial uses - This alternative would allow some water quality degradation but would demand the preservation of existing and potential beneficial uses.

3. Allow water quality degradation with the resultant loss of one or more beneficial uses - This alternative would allow water quality degradation at a level which would affect beneficial uses.

These categories define a degradation scale with category one (no degradation) as one extreme and category three (loss of beneficial uses) as the other extreme.

The Regional Board takes the position that existing water policies dictate the maintenance of existing water quality

unless sufficient justification can be made for anything less. Therefore, the establishment of cleanup goals that allow degradation must be based on technical and economic factors and the consequences of allowing degradation relative to potential and existing beneficial uses.

To provide appropriate information for the Regional Board to make a decision on cleanup objectives, a report from the discharger is required containing the following components:

1. Vertical and lateral extent of soil and groundwater contamination-may be referenced from previous submittals

2. Local and regional geohydrology-may be referenced from previous submittals

3. Existing water quality evaluation - i.e., water quality that existed before occurrence of the release in question

4. Existing and potential beneficial uses - evaluation of all beneficial uses that are or may be impacted by any portion of the contamination

5. Available water quality criteria and technical literature applicable to each identified beneficial use - may include values from EPA, DHS, Department of Fish and Game, and other sources

6. Cleanup alternatives - evaluation of a minimum of three cleanup alternatives as specified in Regional Board staff guidelines. For each alternative, the evaluation must include:

   - specific level of impact on beneficial uses
   - source cleanup necessary to achieve that level
   - plume control and cleanup program necessary to achieve that level
   - proposal of cleanup verification program
   - cost of alternative
   - cleanup time estimate

7. Tabulation summary of key alternative evaluation data to allow easy comparison of alternatives. The discharger should indicate the alternative preferred.

The report submitted is reviewed by the Regional Board and other appropriate agencies. The Regional Board staff then makes a recommendation to the Executive Officer on cleanup objectives and the discharger's strategy to achieve these objectives. The Executive Officer reviews the staff recommendation and presents the case at a public Board meeting. The Board makes the final determination on the cleanup remedy based on input from the Executive Officer and the public.

In some cases, interim cleanup measures are needed prior to determination of a final cleanup strategy. When interim measures require a permit for implementation, they too are brought before the Board for approval of the proposed action.

PUBLIC INVOLVEMENT

The Regional Board's public involvement program consists of: public files, notices of pending Board action, and public meetings.

Public Files

The case files at the Regional Board office are available to the public for review at any time during normal business hours.

Notices

The Regional Board maintains mailing lists of interested public to receive notices of Board Meeting agendas and specific tentative orders (e.g., Waste Discharge Requirements or enforcement orders). The notices are mailed out 30 days ahead of time to allow time for public input.

Meetings

Board Meetings are open to the public. It is at these meetings that site cleanup actions are discussed and decisions are made. Interested parties may comment at the meetings.

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IV. COMPARISON OF PROCEDURES

In this part of the report, differences and similarities in the EPA and the Regional Board site investigation and cleanup procedures are identified and discussed. The comparison is broken up into seven procedural steps: discovery, site evaluation, removals, site investigations, feasibility study, selection of remedy, and community involvement.

A. DISCOVERY

SIMILARITIES

Both agencies' procedures logically begin with notification that a release or potential release has occurred. They both draw upon a variety of sources and each agency by law (CERCLA for EPA and Porter-Cologne Water Quality Act for the Regional Board) must be notified when certain types of releases occur.

DIFFERENCES

No differences that impact compliance with the NCP.

B. SITE EVALUATION

Site evaluation refers to the assessment of a site to determine if a problem exists and if so, the type of action needed (immediate removal or remedial). In EPA terms, this step includes the preliminary assessment (PA) site inspection (SI), and NPL determination. In Regional Board terms, it includes the preliminary site survey and preliminary site investigation.

SIMILARITIES

EPA's PA and SI accomplish the same objective as the Regional Board's preliminary site survey and preliminary site investigation. In these steps, both agencies are gathering available information, and visiting the site to help determine if a problem exists. EPA may take samples during a site visit if appropriate (e.g., in a suspected groundwater contamination case, an existing well may be sampled) whereas the Regional Board would have the suspected discharger install a monitoring well to sample soil and groundwater in a preliminary site survey. The sampling and analysis (either EPA's or a suspected discharger's as required by the Regional Board) provides additional information on which the agency can base a decision regarding necessary further action.

DIFFERENCES

Sampling at a site during the site evaluation phase is conducted by EPA under their system. Under the Regional

Board's system, sampling is usually conducted by the discharger and reported to the Regional Board.

C. REMOVALS

SIMILARITIES

Both agencies require removal actions to be taken if a release poses an immediate threat to public health or the environment. They also both require a written proposal or workplan for the action to be approved.

DIFFERENCES

No differences that impact compliance with the NCP.

D. SITE INVESTIGATION

This step is known as the Remedial Investigation (RI) in the EPA system and the Comprehensive Site Investigation in the Regional Board system. For both agencies, the objective is to define the extent and magnitude of the problem.

SIMILARITIES

Both agencies require that a work plan be prepared and approved prior to starting the investigation. The plan describes the scope of work to be done and procedures or techniques to be used. In groundwater/soil contamination cases, the work plan would likely address: number and placement of monitoring wells and/or soil borings, construction techniques, sampling techniques, analyses to be performed, and other tests to determine hydrogeologic factors.

At the end of the investigation, both agencies require a written report summarizing results of the investigation.

Investigations overseen by either agency may be carried out in phases. This is the case in particular with groundwater contamination sites where the results of the first phase of sampling are needed before the next phase can be planned. Each agency would require workplan revisions prior to investigation activities and a report after the investigation for each phase.

DIFFERENCES

The primary differences in investigations carried out under the EPA and the Regional Board are the amount of detail required prior to approval and the availability of formal guidance for planning the investigation.

After a workplan is approved, EPA requires a detailed sampling plan, quality assurance project plan (QAPP), and site safety plan. EPA guidance documents from both the national and regional levels are available for preparing these required plans. This results in some consistency among investigation plans prepared for or by EPA.

The Regional Board does not require as much detail as EPA does in the planning documents. In particular, quality assurance procedures are not required and may or may not by volunteered by the discharger. On a case-by-case basis, however, the Regional Board would require specific quality assurance information that they believed to be relevant. The Regional Board does have guidelines for monitoring well construction, sampling, and analysis of samples. They also require the use of laboratories certified by DHS. A site safety plan is not required by the Regional Board.

E. FEASIBILITY STUDY

For EPA this step consists of: development of alternatives, initial screening, detailed analysis of alternatives, and a report. For the Regional Board this step consists of: development of alternatives, analysis of alternatives, and a report.

SIMILARITIES

Both agencies require that a range of alternatives be developed and specify categories of alternatives that must be included to make up that range. In addition, both require that the alternatives be evaluated in terms of effect on public health and the environment, cost, and technical feasibility. A report is required by both agencies to summarize the data developed.

DIFFERENCES

EPA defines five categories for which alternatives should be developed. The categories range from no action to removal of contamination to an offsite facility, with categories in between that are tied to relevant standards. The Regional Board specifies three categories based on beneficial uses of the water resource. They include: allowing loss of beneficial use(s) due to degradation; allowing some degradation, but not to the point of loss of a beneficial use; and maintenance of existing water quality. RB

The differences in the categories defined are:

- The Regional Board requires the discharger to evaluate an alternative that allows no degradation of the groundwater while EPA does not

this might change

- EPA requires evaluation of removing contaminants to an offsite facility while the Regional Board does not (although allowing no degradation may mean removal to offsite facility)

- In the middle range between no degradation and no or minimal action (i.e., allowing loss of beneficial use) EPA defines three categories: exceed standards; attain standards; and does not attain standards but protects health and environment. In the same middle range, the Regional Board defines one category: attains standards.

The other main difference is that EPA requires all possible alternatives to be considered in the beginning of the feasibility study with an initial screening step to narrow the list of alternatives to those most reasonable. The Regional Board requires that the discharger present only a minimum of three final alternatives, although the discharger my have gone through with an initial screening process to get to those three (or more) submitted in the final report.

F. SELECTION OF REMEDY

SIMILARITIES

Both agencies make the final selection of cleanup remedy based on information presented in the investigation and feasibility study reports, and on public input. The Regional Board selection must be the alternative that maintains existing water quality unless sufficient justification can be made for something less. The EPA selection must be an alternative that attains or exceeds applicable public health or environmental standards or, if no standards exist, adequately protects public health and the environment. Under certain circumstances, an alternative that does not meet existing standards may be selected. In other words, both agencies consider the cost-benefit balance in selecting a remedial action.

DIFFERENCES

No differences that impact compliance with the NCP.

G. COMMUNITY INVOLVEMENT

SIMILARITIES

Both the EPA and the Regional Board allow for public involvement in the process for determining remedial actions to be taken at a site. The agencies both maintain mailing lists of interested parties and notify those parties of upcoming actions on specific cases. Public meetings are held in both

cases: for the Regional Board, the meetings are their regularly scheduled Board meetings; for EPA, special meetings are held to discuss actions at a particular site.

DIFFERENCES

The EPA procedure for public involvement is more formalized than that of the Regional Board. EPA requires a community relations plan for each site investigation and cleanup case. They require public meetings to be held specifically to present the feasibility study results. They also require a document summarizing major issues raised by the public during the remedial action selection and how the issues were addressed. The Regional Board does not have similar requirements.

SFR102/020

APPENDIX
LIST OF SOURCES CONSULTED

EPA

Comprehensive Environmental Response, Compensation, and Liability Act of 1980

National Oil and Hazardous Substances Pollution Contingency Plan; Proposed Rule, Federal Register, Vol. 50, No. 29, February 12, 1985

Guidance on Remedial Investigations under CERCLA, May 1985

Guidance on Feasibility Studies Under CERCLA, April 1985

Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans, December 29, 1980

Region IX, EPA Site Screening Procedures

Region IX, EPA Sample Plan form and instructions

REGIONAL BOARD

Interim Guidance for Hazardous Substances Site Cleanup, adopted March 15, 1985 by the State Water Resources Control Board

"Regional Board Consideration of Groundwater Contamination Cases," internal memorandum dated March 6, 1984

"General Guidelines for Subsurface Investigations"

"Regional Board Staff Guidelines with respect to Establishing a Procedure to Identify Water Quality Objectives for Hazardous Material Site Cleanup," March 9, 1983

"Draft Implementation Guidelines for Hazardous Material Site Cleanup - Report Format," June 2, 1983

The Porter-Cologne Water Quality Control Act

Telephone conversations with Don Eisenberg of the Regional Board on May 13, 21, 29, and June 3, 1985

Telephone conversation with Mike Faulkenstein of the State Board on May 29, 1985

APPENDIX C

RWQCB Letter
Dated July 29, 1985

TATE OF CALIFORNIA
GEORGE DEUKMEJIAN, Governor

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
AN FRANCISCO BAY REGION
111 JACKSON STREET, ROOM 6040
OAKLAND 94607
Phone: Area Code 464-1255

Mr. Harry Saraydarian
U.S. EPA, Region 9
215 Fremont Street
San Francisco, CA 94105

File No. 1114.17

July 29, 1985

Dear Mr. Sarydarian,

We have reviewed the Draft Report titled "Comparison of Uncontrolled Hazardous Waste Site Investigation and Remedial Action Procedures" dated June 1985. We feel that the document presents an accurate general description of our procedures and, from what we know of EPA's procedures, an accurate comparison of the two programs.

Regarding the items noted in Table 1 of that report under "Changes to Bring Regional Board into Conformance With NCP", we intend to make the changes necessary to insure NCP compliance for activities at sites on the NPL, sites recommended for listing on the NPL, and for initial work at new sites up to the point where EPA has sufficient data to rank the new sites.

We can only make these changes, however, within the constraints of funding and staff as provided in the Cooperative agreement workplan. That workplan provides for most of the necessary changes, with the following possible exceptions :

1) Site Evaluation The Regional Board does not have the funding, staff, or contracting capabilities to perform initial site investigations using its own resources. Further, we have had very good success in obtaining PRP-funded initial investigations. We are more comfortable with that approach, and it has proven very effective in identifying the 91 sites presently under investigation. We can and will take a limited number of split samples at sites where that is appropriate, and we will notify EPA of sites where initial evaluation is underway so that EPA can evaluate the need for any additional investigation by EPA.

2) Community Involvement The community involvement activities in the Community Involvement Workplan include Public Hearings in the form of Regional Board meetings to consider Board Orders responding to Feasibility Study results. That workplan, incorporating established Regional Board procedures for public notification, public and other-agency review, and public hearings for consideration of Board Orders, should be acceptable as a "generic" public involvement program. If additional activities are required beyond those funded under the

workplan and those funded by Board's base program, then we will have to request EPA's additional assistance, in the form of either EPA staff assistance or modification of the Scope of Work of the Cooperative agreement.

Finally, as noted above, the commitment to modifiy the Regional Board's Progra. will apply to all sites listed or proposed for listing on the National Priorities List, and to activities necessary for EPA to rank new sites. For the resolution of minor sites which do not score high enough to propose for listing, the Regional Board may choose to apply our existing procedures which the report finds to be substantially in compliance with the NCP. We will also apply as many of the suggested modifications as are appropriate at these sites; but we feel that it is not appropriate to limit our flexibility in resolving these relatively minor cases.

Thank you for the opportunity to review this report. I look forward to starting work on the cooperative agreement activities. If you have questions or if there is anything else we can do, please contact Don Eisenberg at (415) 464-1325.

Sincerely,

Roger B. James
Executive officer

APPENDIX D

South Bay Community
Involvement Plan

HAZARDOUS
SITE CONTROL
DIVISION

Remedial Planning/ Field Investigation Team (REM/FIT)

ZONE II

CONTRACT NO.
68-01-6692

CH2M HILL
Ecology &
Environment

COMMUNITY INVOLVEMENT PLAN

SOUTH BAY AREA
SANTA CLARA COUNTY, CALIFORNIA

07-9V01.0

April 15, 1985

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CVR72/001-2

INTRODUCTION

This community involvement plan has been prepared for groundwater contamination cleanup activities in Santa Clara County, California. Nineteen sites in the county were included in the 1984 proposed update of the National Priorities List. Approximately 100 other contaminated sites have been identified within the area and it is expected that additional sites will be identified as a result of ongoing ground water monitoring programs. Because of the large number of sites, the objective of this plan is to establish a framework for conducting community involvement activities in the South Bay as a whole. The plan does not include community involvement programs for specific sites but, rather, indicates generally how and when they can be integrated into the areawide program.

The San Francisco Bay Regional Water Quality Control Board (Regional Board) is the lead agency for cleanup activities on the National Priorities List sites as well as at other South Bay sites. The U.S. Environmental Protection Agency (EPA) will assume the lead role in overall coordination of community involvement activities in the South Bay, but each agency of the South Bay Ground Water Contamination Task Force will be responsible for specific tasks in the community involvement plan. Under the proposed Multi-Site Cooperative Agreement between EPA and the state, funds for community involvement activities will be made available to the Regional Board and the Santa Clara Valley Water District (Water District), agencies with responsibility for carrying out major portions of the community involvement plan.

ORGANIZATION OF THE PLAN

The community involvement plan is divided into the following sections:

A. Community Involvement Background
B. Issues and Objectives
C. Community Involvement Work Plan
D. Staffing Plan

The Community Involvement Background describes the history of community involvement activities. The Issues and Objectives section discusses interested parties and their concerns. This information was used to design community involvement objectives for the South Bay program.

The Community Involvement Work Plan describes the techniques that will be used and designates specific tasks to be undertaken by particular agencies during the investigation and cleanup The Staffing Plan includes staff allocations and a budget for each participating agency.

A mailing list of about 500 elected officials, community organizations, agency staff, industry representatives, water purveyors, information repositories, interested individuals, and media contacts has also been prepared. It is not included in this document because of its length.

INTERVIEWS CONDUCTED

This plan was based on discussions with the following persons during December 1984 and January 1985. Their addresses and phone numbers are included on the mailing list.

U.S. Environmental Protection Agency, Region 9

Laurel Chun, South Bay Team Leader

Davis Bernstein, South Bay Team Member

Steve Drew, Community Involvement Coordinator

Don Schwartz, Integrated Environmental Management Project (Consultant)

California Department of Health Services

Dwight Hoenig, Chief, North Coast California Section, Toxic Substances Control Division

San Francisco Bay Regional Water Control Board, Region 2

Roger James, Executive Officer

Santa Clara Valley Water District

John O'Halloran, General Manager
James Melton, Public Information Officer

Santa Clara Water Retailers Association

George Adrian, Chairman

U.S. Congressional Delegation

Nina Santomieri, Staff Assistant to Congressman Norman Mineta
Joan Williams, Staff Assistant to Congressman Ed Zschau
Bob Woldow, Staff Assistant to Congressman Ed Zschau
Drew Dougherty, Staff Assistant to Congressman Ed Zschau

Santa Clara County

Sally Reed, County Executive
Suzanne Wilson, Board of Supervisors
Bernice Giansiracusa, Director of Public Health
Steve Brooks, Hazardous Materials Program Coordinator

City of San Jose

Nancy Ianni, Councilwoman

City of Mountain View

Maryce Freelan, Mayor
Bruce Liedstrand, City Manager
Philip Rose, Assistant to City Manager
Norman Lougee, Water Division Engineer

Community Organizations

Mike Belliveau, Citizens for a Better Environment
Ann Coombs, League of Women Voters
Betty Vogel, League of Women Voters

Industry Associations

Megan Taylor, Industry Clean Water Task Force

/CVR72/003

Section A
COMMUNITY INVOLVEMENT BACKGROUND

SITE BACKGROUND

AREA DESCRIPTION

The Santa Clara Valley (or South Bay) includes the 1,300 square miles of Santa Clara County. Its 1984 population was about 1.4 million. The principal cities in the area are San Jose (the county seat) with a population of about 640,000; Sunnyvale (110,000); Santa Clara (90,000); Mountain View (60,000); and Palo Alto (55,000). The County's growth rate between 1970 and 1980 (22 percent) was twice the national average. Principal industries in the South Bay include manufacturing of semiconductors, aerospace equipment, computer equipment and printed circuit boards; electroplating; and metal finishing.

DRINKING WATER SOURCES

Drinking water in the Santa Clara Valley comes from three sources: ground water drawn from wells, surface water imported through the South Bay and Hetch Hetchy Aqueducts; and impounded local surface water. Overall, ground water supplies slightly more than one-half of the drinking water used in the valley. Large volumes of imported and local surface water are used to recharge the ground water basin artificially. Although all surface water used for drinking in the valley is treated prior to distribution, most ground water is untreated. The nineteen major water retailers (10 municipal agencies and nine private water companies) operate about 300 wells. More than 200 additional small water systems that serve from 5 to 199 connections (most have about 10 connections) also draw on the aquifers. In addition, there are numerous private wells serving individual households and businesses. Together, the small systems and private wells total about 5,200.

WATER QUALITY PROBLEMS

The Santa Clara Valley has traditionally had access to high quality drinking water. However, in recent years, water quality problems have become matters of public concern. High nitrate levels persist in the southern portion of the valley and in some parts of North County. Nitrates are released by septic tanks and can leach from fertilized fields, lawns, and orchards. Because of this contamination, the County Health Department determined that water in some South County areas is unsuitable for use by infants. Chlorination of surface water had resulted in levels of trihalomethanes (THMs) that approached and sometimes exceeded the federal

standard in some treated drinking water. Altered water treatment processes have recently reduced THMs to levels within federal and state standards. Pesticides may contaminate ground water supplies in the valley if they leach into shallow aquifers and may also be present in water imported through the South Bay Aqueduct, but monitoring has not detected such contamination.

Leaks and spills of chlorinated organic solvents and related chemicals, notably trichlorethylene (TCE) and 1-1-1 trichloroethane (TCA), from industrial facilities in the South Bay area have triggered an even greater level of public and agency concern. Contamination has been discovered at 110 industrial sites in the valley and has resulted in the contamination of 13 public water supply wells. An additional 46 private wells contain chemical contamination. Thirty-five of these draw from the shallow aquifer in Mountain View and 11 from the recharge zone in South San Jose.

The clay layer separating the shallow and lower aquifers helps to keep contaminants from entering the lower aquifer. None of the wells that draw from the deep aquifer are known to be contaminated. However, some of the abandoned agricultural wells in the area may act as conduits through which the contaminants can reach the deep aquifer. The number of abandoned wells is estimated at about 10,000.

AGENCY AND INDUSTRY INVOLVEMENT

In the fall of 1978, an International Business Machines (IBM) facility on the east coast developed leaks in its underground tanks storing organic solvents. IBM subsequently began a corporate-wide tank monitoring program. Contaminated soil was discovered around underground tanks at the IBM-San Jose plant in the fall of 1979. Monitoring wells were installed to determine the extent of contamination. IBM requested involvement of the San Francisco Regional Water Quality Control Board (Regional Board), the agency with overall responsibility for assuring water quality, in October 1980. During the following year, storage tanks and contaminated soils were removed, additional monitoring wells were established and new storage tanks were installed aboveground.

In the fall of 1981, IBM and the Regional Board notified the California Department of Health Services (DOHS), the Santa Clara County Water District (Water District), Santa Clara County Health Department, and the Great Oaks Water Company about the actions that had been taken at the site. (The roles and responsibilities of these agencies are discussed in Section B, "Interested Parties and Key Concerns.")

At about the same time, a leak in a solvent waste tank at the San Jose Fairchild Camera and Instrument (Fairchild)

facility was discovered. Fairchild removed the contaminated soil and installed a ground water monitoring system. Monitoring data indicated that contamination had spread several miles from the sites. Between December 1981 and March 1982, the Great Oaks Water Company closed three wells downstream of the sites (Nos. 2, 8, and 13). TCA levels reached 8,800 ppb in well No. 13 but did not exceed either DOHS or EPA standards in well Nos. 2 or 8.

In March 1982, the Regional Board initiated a leak detection program to define the overall magnitude of leakage from underground chemical storage tanks. The program began with a survey of over 2,500 companies. Based on responses to this survey, the Regional Board required many companies to initiate subsurface investigations to determine if their tanks had been or were leaking. Companies with leaking tanks were then required to work with the Regional Board to identify the extent of contaminant migration and take remedial actions to clean up contaminated ground water.

In June 1983, the U.S. Environmental Protection Agency (EPA) met with the Regional Board to offer technical assistance in the emerging South Bay ground water contamination problem, including the ranking of various sites for inclusion on the National Priorities List (NPL). Two sites (Fairchild-San Jose and IBM-San Jose) were recommended for inclusion on the 1984 NPL update as a result of their August 1983 Hazard Ranking System scores.

In July 1984, EPA evaluated approximately 30 additional South Bay sites and found 17 more sites that scored high enough to be recommended for inclusion on the NPL. A total of 19 Santa Clara County sites were proposed for inclusion on the August 1984 NPL update.

By August 1984, a total of 126 sites had been identified in the South Bay. Ninety-one of these sites have ongoing remedial action activities, 19 sites require no further action, and 16 sites showed no contamination. The status of sites in the latter categories will be reevaluated during 1985. The Regional Board has approved final plans for cleanup of part of the IBM-San Jose site but that decision may be contested. Both IBM and Fairchild are extracting contaminated ground water as a means for controlling contaminant levels and containing migration. The extracted ground water is discharged into the local sewer system.

The South Bay Ground Water Contamination Task Force, composed of top-level managers from government agencies, convened in August 1984 to coordinate ground water contamination cleanup activities in the South Bay. The Task Force continues to meet monthly.

HISTORY OF COMMUNITY INVOLVEMENT ACTIVITIES

Dissemination of information about South Bay ground water contamination has been widespread, has taken many forms, and has been ongoing for 3 years. Rather than cataloging each community involvement activity and participant, this part of the section briefly reviews news media coverage of project-related activities. The discussion of community involvement activities of community organizations, private companies, government agencies, and elected officials in Section B ("Interested Parties and Key Concerns") gives a sense of the variety and magnitude of these efforts.

News media coverage of South Bay ground water contamination issues and activities was extensive from fall 1981 through spring 1982 after circumstances surrounding the IBM-San Jose and Fairchild-San Jose sites and the leak detection program were first widely publicized. News coverage increased again from June through August 1984 when leaking solvents from underground tanks at Teledyne Semiconductor-Mountain View contaminated private wells, when EPA was evaluating candidate sites for the NPL, and when EPA announced proposed NPL update sites.

News media coverage can be divided into four categories: major newspapers, small local newspapers, newspapers of national circulation, and television and radio stations. The major Bay Area daily newspapers involved in coverage of South Bay ground water issues include the San Jose Mercury News, the Palo Alto Peninsula Times Tribune, the San Francisco Chronicle and Examiner, and the Oakland Tribune. The San Jose Mercury News and Peninsula Times Tribune have provided the most extensive coverage; other newspapers have published stories on major events. Those interviewed during the preparation of this plan agreed that, on the whole, press coverage has been informed and responsible. Many felt, however, that headlines for stories concerning South Bay ground water contamination were unnecessarily dramatic and often did not accurately reflect the content of the stories.

Small newspapers, including local weeklies and monthlies and university newspapers, have provided limited information to the public. These include the Palo Alto Weekly, Los Altos Town Crier, Mountain View View, the Gilroy Dispatch, and the Cupertino Courier.

Recent national media coverage has been limited to a Wall Street Journal article and a Datamation editorial and article ("Poison in Paradise") published in August 1984 that reported on the overall ground water contamination problem in "Silicon Valley." Both articles were read and discussed widely in the South Bay area and, according to EPA staff, contained misleading and inaccurate information.

Television coverage of Santa Clara Valley ground water contamination has been provided by all local stations. Channel 2 broadcasted a special prepared by the Bay Area League of Women Voters on hazardous waste issues including South Bay ground water contamination.

/CVR72/025

Section B
ISSUES AND CONCERNS

INTERESTED PARTIES AND KEY CONCERNS

Interested parties include the state agencies (DOHS and the Regional Board), the Santa Clara Valley Water District, Santa Clara County and municipalities within the county, advisory and management committees formed to address ground water contamination issues or to provide guidance to studies on toxic pollution in the South Bay, water purveyors, industry, community organizations, the South Bay federal congressional delegation, and the general public. This section discusses the role and responsibility for ground water management (when appropriate), organizational structure, community involvement activities, and major concerns of each interested party.

DEPARTMENT OF HEALTH SERVICES (DOHS)

Ground Water Management Responsibility

Two groups in DOHS, the Sanitary Engineering Branch (SEB) and the Toxic Substances Control Division (TSCD), have responsibility related to ground water management.

Under the California Health and Safety Code, SEB reviews and approves sources of community water supply for water utilities of 200 or more service connections. The permitting authority for systems with 5 to 199 connections rests with the County Health Department. In the event of contamination, SEB must assess the potential health hazard. If SEB determines that the source is unusable, the utility is required to discontinue its use and provide water from other approved sources when possible.

The TSCD has broad authority under the Federal RCRA program and the State Hazardous Waste Control Law to regulate hazardous wastes in the state including permitting of hazardous waste treatment and storage facilities and enforcement of permit regulations. TSCD also operates the state's "Superfund" program, which provides response authority and funding to cleanup hazardous substance spills and hazardous wastes sites. This program also provides 10 percent matching funds on certain actions taken by the federal government under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

DOHS is represented on the South Bay Task Force by staff from SEB and TSCD.

Community Involvement Activities

DOHS (in cooperation with Santa Clara County Health Department) organized the private well sampling program in Mountain View and prepared information concerning test results for release to concerned elected officials and the press. Agency staff are compiling information on the health effects of contaminants that have been found in South Bay ground water in a form suitable for dissemination to the public. DOHS also developed an epidemiological study with the Center for Disease Control that was released in January 1985. The agency representative interviewed during preparation of this plan indicated that DOHS generally does not receive requests for information from concerned citizens, but does receive many calls from reporters and elected officials.

Key Concerns

DOHS feels that the existing agency programs generally address the South Bay ground water contamination problem adequately. It believes that the Multi-Site Cooperative Agreement now being discussed by EPA, DOHS, and the Regional Board will clarify agency responsibilities and allow DOHS to provide necessary support to the Regional Board.

SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD (REGIONAL BOARD)

Ground Water Management Responsibility

The role of the Regional Board is defined by the California Water Code, which requires that the Board obtain coordinated action to assure water quality, including the prevention and abatement of water pollution and nuisance. It responds to reports of discharges detected by activities mandated under the state's 1984 "Sher Bill" (AB 1362).

The Board can require industry to perform technical investigations related to water quality, issue Cleanup and Abatement Orders (CAO), and issue and enforce waste discharge requirements administratively with Cease and Desist Orders (CDO) or judicially through the Attorney General's Office. Civil penalties can be obtained for violation of requirements, CAO's, CDO's, or prohibitions of a Basin Plan.

The Regional Board is represented on the South Bay Task Force by the executive director.

Community Involvement Activities

The Regional Board staff member interviewed indicated that the Regional Board has been besieged with phone calls concerning the status of cleanup activities in general and at individual sites. These requests are handled by the

technical project officers since the agency has no public information office.

The Regional Board uses a limited notification procedure in conjunction with its water pollution abatement functions. When leaks are reported to the Regional Board, its staff notifies key federal and state agencies and local elected officials. Agency staff (EPA, DOHS, water purveyors, and cities) receive copies of correspondence concerning site investigations. The Regional Board sends notices of hearings on final site cleanup plans to a larger group, usually including any individual or organization that has requested information on the site. The Regional Board's notification process does not include any notification of the general public.

The Regional Board distributed a 205 (j) water resources management report to interested parties in February 1985. The document includes data profiles and risk assessments of 60 South Bay sites. The remainder of the site profiles are to be prepared by July.

Key Concerns

The agency identified the need for a greater staff capability to respond to requests for information from the public and suggested that the Regional Board could serve as a central information contact if this function is included in the Multi-Site Cooperative Agreement. Such an additional capability of the Regional Board would permit an expansion of the existing notification process and would allow for close coordination between technical and community involvement activities.

SANTA CLARA VALLEY WATER DISTRICT (WATER DISTRICT)

Ground Water Management Responsibility

The Water District was created by the State Legislature and given limited authority in ground water management. The Water District captures local surface water and imports, treats, and distributes water on a wholesale basis to local water companies. It percolates both locally conserved and imported water to recharge the ground water basin. The Water District also registers wells and regulates construction and closure.

The Water District's legal authority to prevent ground water contamination is limited to civil action. It may sue in a civil court to reduce a nuisance or to halt a harmful activity, but it cannot issue cease and desist orders, mandate repairs, or cite polluters. It is primarily a service organization rather than an enforcement agency.

The Water District is represented on the South Bay Task Force by the executive officer.

Community Involvement Activities

The Water District has generally maintained a low profile regarding public communication on South Bay ground water contamination issues, although its ongoing program for closure of abandoned agricultural wells has recently received favorable press coverage. According to agency representatives interviewed during preparation of this plan, the Water District has received very few calls from individuals requesting program-related information.

The District prepared a map of the South Bay illustrating water purveyor service areas and sources of water supply in summer 1984. The agency also offered to assist water purveyors in a public information effort to assure consumers that their drinking water was safe, but the water purveyors felt it was inappropriate to place themselves in a position of such high visibility. The Water District staff still believes that this type of public communication would be useful.

Key Concerns

The Water District staff believe that faster action on site cleanup efforts is needed. They believe that "doing something about the problem" is necessary to change public perception, but recognize that agencies with enforcement authority are understaffed. Water District staff think the understaffing problem will be exacerbated as the local hazardous materials storage ordinances begin to be implemented and more sites are identified. They believe that one avenue for improving the efficiency of permitting and enforcement activities would be an alteration of the Water District's statutory authority to allow it to assist in these activities.

SANTA CLARA COUNTY HEALTH DEPARTMENT

Ground Water Management Responsibility

The County is involved with ground water management primarily under two laws, the California Safe Drinking Water Act (SDWA), and the Santa Clara County Hazardous Materials Management Ordinance (HMMO).

For public water systems with 5 to 199 service connections, the County Health Department carries out the provisions of the California SDWA. Under this act, the County permits, inspects, and monitors these systems. The County also consults with water purveyors, responds to consumer complaints

regarding water problems, and oversees a program of private well sampling.

Under the HMMO, the County has established a program to regulate the storage and handling of hazardous materials above and below ground in all unincorporated areas of the county. Also, Los Altos Hills, Saratoga, and Monte Sereno have authorized the County to enforce hazardous materials regulations within their jurisdictions. On federal property the County will also enforce the provisions of the "Sher Bill" (AB 1362) relating to underground storage.

Community Involvement Activities

The County Health Department has a long history of community involvement work on environmental health issues. It was instrumental in establishing a citizen involvement program in response to public concern over the "Medfly" program from 1980 to 1982, and also established an advisory committee of community representatives and medical experts who explored potential health effects of the Fairchild-San Jose site contamination. Key issues considered by the committee were birth defects and reproductive health. In response to local neighborhood interest in activities relating to the Alviso site (a proposed NPL asbestos waste disposal site located near the south end of San Francisco Bay), the County Health Department formed a citizens advisory committee and organized a series of small, well attended, neighborhood meetings. Local youth groups distributed leaflets to explain the committee's role and encourage participation in the meetings.

In addition to these broad-based community involvement activities, the County Health Department also notified residents in many Santa Clara County communities about the test results on water samples obtained from their private wells. All residents whose wells were sampled received personalized letters explaining test results and suggesting the use of alternate drinking water sources. The Health Department has also developed a draft protocol for a supplemental well sampling program in the Mountain View and down gradient from the Middlefield Road/Ellis Street sites. This identifies agency and industry responsibilities and methodologies for surveying, sampling, analysis, and public information. The affected individual companies and agencies (DOHS, Regional Board, and Water District) are reviewing the protocol.

The Health Department receives many calls from citizens concerned about the quality of the drinking water and the potential health effects of drinking contaminated water. These are handled by staffs of the Hazardous Materials Program and Environment Health Services.

Key Concerns

The Health Department strongly believes that all of the involved agencies must be more responsive to community concerns; they must provide answers to questions that are asked (including what is not known as well as what is known) rather than evasive replies and referrals to other agencies. A related concern is the need for improved interagency communication on information being provided to the public. Agency staff indicated that while it is not essential for all agencies to provide exactly the same data, it is essential for each agency to be aware of information other agencies are providing and how and why it differs from what they provide.

The staff suggested that both objectives could be accomplished through a coordination mechanism or by establishing an interagency information center. Health Department staff as well as others interviewed during preparation of this plan feel that the Health Department is respected as a source of reliable information and would be a likely choice to house such an information center if funding were made available.

Agency spokesmen identified agency liability and its relationship to open communication with the public as another key concern. This results from the recent proliferation of lawsuits by South Bay residents against industry and water companies. Health Department staff feel that the polarization of attitudes resulting from the lawsuits creates barriers to citizen involvement in agency-sponsored studies, surveys, or other project related activities.

The agency is also concerned about the development of a coordinated, consistent approach to private well sampling and to notification of residents affected by drinking water contamination.

CITY AND COUNTY ELECTED OFFICIALS AND ADMINISTRATORS

Organizational Structure

Santa Clara County is governed by a five-member board of supervisors elected by district in non-partisan elections. In addition to the County Health Department's responsibilities related to this program (described above), the County Planning and Development Department has environmental responsibilities concerning the location of solid waste sites and the County Agriculture Department for the use of pesticides.

San Jose is governed by a mayor and a 10-member city council elected by district in non-partisan elections. Other cities in the South Bay are also governed by city councils elected

in non-partisan elections. Their mayor's positions are generally rotated among Council members. City Fire Departments have responsibility for implementation and enforcement of hazardous materials management ordinances (HMMO's). This involves surveying of all above and below ground toxic chemical storage locations, assuring that hazardous material inventories are filed and updated, filing hazardous material management plans, assuring that monitoring systems meet standards established by the Water District, and periodically inspecting storage sites. Water pollution control departments operate water treatment programs.

Several organizations represent groups of interested city and county elected officials and administrators. The Intergovernmental Council of Santa Clara County (IGC) considers issues that affect all of the jurisdictions within the county. It is composed of elected officials representing the county, school board, water district, and each city. The mayor of Palo Alto chairs the group's monthly meetings. The City Managers Association (CMA) is a professional association of city managers in Santa Clara County that meets monthly. Its chairman (Sunnyvale's city manager) represents municipalities on the South Bay Task Force. The Fire Chiefs Association is a professional organization of fire chiefs in the county. Palo Alto's fire chief chairs the group's monthly meetings.

Community Involvement Activities

The IGC, the CMA, and the Fire Chiefs Association were all involved in developing the model HMMO. The IGC also was active in the public information response to contamination at the IBM and Fairchild sites in 1981 and 1982.

Cities in which public or private wells have been closed (San Jose and Mountain View) are receiving many phone calls from individuals wanting specific information about the safety of their drinking water and actions being taken to clean up the contaminated sites. Mountain View administrators indicate that in December three people were working full time to respond to these calls. Callers are often referred to the County Health Department as a source of additional information.

Fire departments, which are responsible for implementation and enforcement of the HMMO, do not have public information officers or staff assigned to communicate with the public. Public notification procedures have not been developed.

Key Concerns

Administrators and elected officials very much want to be informed about key decisions, events, and activities relating to South Bay ground water contamination prior to any

reports by the media. A number of officials have been surprised by calls from constituents asking about news stories of which the officials had no knowledge, despite their concerted efforts to remain informed. Those interviewed generally found that site-specific information was available from the agencies when it was requested by staff and that agency technical support had been helpful.

Local and county officials indicated that their HMMO programs have identified thousands of companies that will need to be monitored. The fire departments will likely find many leaks during the ordinance enforcement process. Officials are concerned about the capability of the Regional Board to handle the potentially large number of new sites.

A number of city officials have expressed pride in the cooperative industry-government-environmentalist effort that led to passage of the HMMO's. They perceive a need to balance fairness to industry with strong action on environmental problems.

INTEGRATED ENVIRONMENTAL MANAGEMENT PROJECT (IEMP)

Organization structure

The EPA's IEMP began in 1983. The project's purpose is to evaluate and address toxic environmental problems in Santa Clara Valley's air, surface water, ground water, and land.

The project will identify and define risks to public health posed by exposure to these contaminants, assess the relative severity of these risks, and develop approaches to manage these risks more effectively.

Two advisory committees provide guidance to the project. The nine-member Intergovernmental Coordinating Committee (ICC) includes two mayors, two city council members, a county supervisor, and representatives of the Regional Board, Water District Board, Bay Area Air Quality Management District (BAAQMD) Board, and the Association of Bay Area Governments (ABAG). The ABAG and BAAQMD representatives are also county supervisors. The committee meets monthly to advise EPA on the environmental issues of primary concern to the organizations they represent and on financial and institutional factors affecting selection of possible control strategies.

The 25-member Public Advisory Committee includes representatives from regulating agencies, industry, environmental and citizen's groups, and universities and water purveyors. It meets monthly to advise EPA on the IEMP workplan, study priorities, and specific issues of risk assessment and risk management.

COMMUNITY INVOLVEMENT ACTIVITIES

The IEMP has distributed its April 1984 "overview paper" and the October 1984 interagency "white paper" on ground water and drinking water in the Santa Clara Valley to nearly 700 people and organizations. Updates of IEMP activities are mailed monthly to about 450 agency representatives, elected officials, industry employees, community organizations, media reporters, and other interested parties. About 100 people receive agendas and minutes of IEMP advisory committee meetings. The mailing list is continually expanded to include those who request information. A draft of one section of the program's Phase I report on risk evaluation is scheduled for distribution in summer, 1985.

Key Concerns

Several members of the advisory committees were interviewed during preparation of this plan. Their concerns are included in the discussions of the agencies and organizations they represent.

SOUTH BAY GROUND WATER CONTAMINATION TASK FORCE

Organizational Structure

The Task Force is a six-member body composed of top level managers of agencies with shared responsibilities for addressing ground water contamination problems in the South Bay area including EPA, Regional Board, DOHS, Water District, Santa Clara County (represented by the county administrator) and South Bay municipalities (represented by the chairman of the City Managers Association). The Task Force was formed in August 1984 to facilitate cleanup efforts and make recommendations on common issues. It meets monthly. Members of EPA's South Bay Team (project officers for South Bay sites) provide administrative support.

The Task Force itself has no authority; the authority and responsibilities rest solely with the agencies themselves.

The primary objectives of the Task Force are:

- To assist government agencies in using their authority and resources to the fullest in addressing the South Bay contamination problem. The Task Force determines what activities are needed to properly deal with this problem. It is examining existing programs and resources and will recommend changes. The Task Force is identifying duplications of effort and eliminating them as much as possible.

- To coordinate and facilitate the efforts of all government agencies involved. The Task Force is developing a joint workplan, obtaining commitments from each agency, and monitoring the work.

In addition, the Task Force focuses on issues relating to the following three areas and makes recommendations to the responsible agencies:

- Discovery, investigation, and cleanup of contaminated sites.
- Establishment of an active community involvement program.
- Prevention of future contamination.

Community Involvement Activities

Agendas and minutes of the Task Force are available upon request. Meetings are open to the public, but are not designed as forums for community participation. Discussions and decisions of the group have been regularly reported by the media.

Key Concerns

The concerns of three members of the Task Force interviewed during the preparation of this plan are included in the discussions of the agencies they represent.

WATER PURVEYORS

Organizational Structure

The cities of Palo Alto, Mountain View, Sunnyvale, Cupertino, Santa Clara, San Jose, Milpitas, Morgan Hill, and Gilroy operate public water systems. The nine major privately owned water companies are the Purissuma Hills Water District, California Water Service Company, San Jose Water Company, Great Oaks Water Company, West San Martin Water Works, Redwood Mutual Water Company, Magic Sands Mobile Home Park, Rancho Santa Teresa Mobile Home Park, and Caribee Mobile Home Park. Stanford University and Moffett Field operate separate water systems. Six of the systems rely entirely on ground water: the Great Oaks Water Company (which has closed 3 of its 13 wells because of contamination), the cities of Gilroy and Morgan Hill and the 3 mobile home park systems. The water purveyors are organized informally into the Santa Clara Water Utilities Association.

Community Involvement Activities

Water purveyors have provided information on water quality to their consumers directly through presentations at community meetings (Great Oaks Water Company) and in water bill inserts (San Jose Water Company and the City of Palo Alto). Indirect community involvement efforts have focused on issuing occasional press releases on the results of well surveys, but may soon be expanded to include orientation tours of laboratory facilities for media and/or local government representatives (San Jose Water Company). Such tours could be used to informally explain testing procedures and analytical methodology for risk assessments.

The Connelly Bill (AB 1803) became effective in California in December 1984 and requires that water purveyors with 200 or more connections monitor their ground water supplies regularly and submit reports to DOHS. These water purveyors are also required to notify consumers if they discover that drinking water contamination exceeds either state or federal standards. The protocol established by DOHS for implementation of AB 1803 for large water systems specifies actions to be taken by the utilities under a variety of circumstances: 1) if no contamination is discovered; 2) if contamination above action levels is discovered; and 3) if contamination is discovered below action levels (or where no action level exists). DOHS encourages informing the public of all monitoring results. Actions identified in the protocol include sampling frequency, removing wells from service, and public notification. The water purveyors notify affected property owners through water bill inserts and media releases. Direct notification in these cases goes to the party who pays the utility bill and may not reach renters of residential or commercial units. Implementation of AB 1803 for small water systems (5 to 199 connections) is scheduled by legislative mandate by January 1, 1986. Implementation responsibility is assigned to the county health departments.

South Bay water purveyors have received numerous inquires from the general public generated by direct mail and newspaper advertisements for water purification devices. These ad campaigns have been mounted by private companies sporadically from 1982 through 1984. For the most part, these ads indicate that drinking water that is not filtered at the tap could be hazardous to health. They are written in a style likely to arouse concern of residents not informed on ground water and drinking water matters.

Key Concerns

Water retailers feel that they have the most detailed understanding of domestic water supply and use and that they should therefore be responsible for notification of consumers about

drinking water quality problems. They believe that centralization of public notification could lead to inaccuracies that might increase public concern unnecessarily. As private companies, they are also able to issue media releases quickly without the clearance through various levels of authority generally required in government agencies.

INDUSTRY

Organizational Structure

South Bay industries are represented by a number of organizations including trade associations and groups specially formed to respond to local ground water contamination problems.

The Industry Clean Water Task Force (ICWT) was founded in October 1984 by four trade and manufacturing associations that represent about 1,200 companies in Santa Clara County. It encourages and supports activities that protect drinking water in the valley by serving as a forum for an exchange of ideas and information on the prevention of ground water contamination and on what is being done to clean up contaminated sites.

The Industrial Environmental Coordinating Committee (IECC) is a consortium of trade associations in the valley that worked with municipalities to develop the model HMMO and is represented on the IEMP Public Advisory Committee. The Peninsula Industry and Business Association (PIBA) and Western Oil and Gas Association (WOGA) also represent Santa Clara County industry.

Community Involvement Activities

Industries in the Santa Clara Valley have been integrally involved in program activities from initial discovery of the problem in 1979 to their present involvement in development of cleanup plans.

The Industry Clean Water Task Force (ICWT) produced a status report on the electronics industry's cleanup efforts in the South Bay in February 1985 for distribution to its members and the general public. It presented measurable indicators of progress in graphic form. Its content was reviewed by agency staff for accuracy prior to public dissemination.

The ICWT sponsored a forum for technical exchange among its member companies in November 1984. Participants identified topics of concern to be addressed at followup meetings including regulatory agency relations, alternative treatment technologies, possibilities for joint cleanup efforts, and

characterization of ground water flows. Additional forums will be held in 1985.

The ICWT's director represented industry in a February public presentation on South Bay ground water contamination problems sponsored by the League of Women Voters. She provides a communications link between government agencies and industry groups.

Individual companies involved in various stages of remedial response have provided information to their employees and the general public. However, there are differing philosophies among the affected companies concerning the public dissemination of cleanup related information. Some feel it is necessary and desirable to share investigation findings and progress reports, while others believe public disclosure may cause serious liability problems.

Key Concerns

Representatives of industry generally feel that the cleanup effort is not well coordinated among the responsible agencies. They have cited differences in standards and procedures as well as time-consuming permit processes that delay cleanup activities.

SILICON VALLEY TOXICS COALITION (COALITION)

The Coalition is an umbrella environmental group that was founded in 1982. Its advisory board is composed of representatives from the Sierra Club, Friends of the Earth, AFL-CIO, Citizens for a Better Environment, and Campaign for Economic Democracy. It is organized as a project of the Santa Clara Center for Occupational Safety and Health (SCCOSH), but is a separate entity.

Community Involvement Activities

The Coalition is widely recognized as the most important environmental organization in the valley; indeed, in the course of interviews conducted during preparation of this plan, it was most often identified as the only environmental group involved with the South Bay ground water contamination issue. The group has aggressively sought cleanup of industrial spills and was instrumental in mounting political pressure for including South Bay sites on the 1984 NPL update. Its chairman is a member of IEMP's Public Advisory Committee.

The coalition publishes a quarterly newsletter, Toxics News, which is focused on hazardous-waste-related activities in the South Bay.

Members of the organization testified at various hearings and city council meetings. The Coalition has also sponsored a number of press conferences and community meetings in the Mountain View/Sunnyvale and San Jose areas that were well attended and well reported in the media. During its July 3, 1984, press conference, the Coalition made specific proposals to EPA and Congressmen Zschau and Mineta. That evening, the Coalition held a community meeting attended by approximately 200 people and the local media. Representatives of the Coalition reported on the South Bay ground water contamination problem and the community expressed its concerns during "open mike" testimonies. Those in attendance ratified the proposals presented by the Coalition at the press conference. EPA and Congressmen Zschau and Mineta were then requested to respond to each of the proposals. EPA was represented by the Director of Region 9's Toxics and Waste Management Division. He agreed to another meeting within 45 days to discuss progress. EPA formally responded to the proposals made by the Coalition in a letter from the Regional Administrator.

A second community meeting was held on August 16, 1984. The Coalition presented four of the proposals for action that it had initiated on July 3 and EPA responded to each. EPA made commitments concerning site status reports, notification, establishment of timeframes for cleanup activities and tap water sampling.

There is a diversity of opinion about the overall effect of the Coalition on public understanding of (and involvement with) the South Bay's ground water contamination problems. Some of those interviewed view the Coalition's participation as constructive and feel that the group has raised significant issues, asked good questions, and generally done what was necessary to "get the ball rolling." Others believe that the organization has tended to exacerbate concern by "working on people's fears" without making necessary clarifications about those affected and those not affected by particular problems. They view the Coalition newsletter as "provocative rather than informational."

Key Concerns

The Coalition has expressed concern about many aspects of the South Bay ground water contamination problem. Those emphasized most by the group are the need for 1) EPA to take a leadership role in site cleanup activities including emergency funding of cleanup efforts; 2) responsible parties rather than taxpayers to pay cleanup costs; 3) medical screening and medical care for residents near toxic sites; 4) air testing in site spill areas; 5) tap water testing in site spill areas; and 6) continued communication between agencies and the Coalition.

SANTA CLARA CENTER FOR OCCUPATIONAL SAFETY AND HEALTH (SCCOSH)

Organizational Structure

SCCOSH is a non-profit, community organization founded in 1979. Its major activities include education on health effects of chemical exposure in the workplace, participation in health and safety committees of local unions, and sponsorship of a disabled workers support group. Local unions are supporting members of the organization. Its membership also includes many local area residents.

Community Involvement Activities

In its labor organization outreach efforts, SCCOSH has distributed fact sheets on health hazards associated with exposure to chemicals commonly used in the electronics industry to its mailing list and to persons specifically requesting occupational safety information. Although this information is not directly related to the ground water contamination issue, some of those interviewed felt that this information has heightened concern about the potential effects of these substances in local drinking water supply sources and that this material is alarmist and misleading.

CITIZENS FOR A BETTER ENVIRONMENT (CBE)

Organizational Structure

CBE was formed in Chicago in 1971 and opened its San Francisco office in 1978. It is basically an urban environmental organization that addresses local, regional, and statewide policy issues. CBE has about 40,000 members nationally and about 13,000 in the Bay Area. It is funded by public contributions, membership fees, and foundation grants.

The group became active in Santa Clara County in July 1982 when discovery of contamination at the Fairchild-San Jose site indicated that ground water contamination from leaking underground tanks at IBM was not an isolated incident. The organization participated in development of the model HMMO, was instrumental in forming the Coalition, and is represented on the IEMP Public Advisory Committee.

Community Involvement Activities

The CBE bimonthly newsletter (CBE Environmental Review) covers a wide variety of environmental issues and featured an article entitled "Poisoned Water in Silicon Valley" in its March/April 1983 issue. It is mailed to all CBE members.

Key Concerns

CBE's major concerns focus on the need for direct communication with the public about the quality of their drinking water. The organization indicated that the general reluctance of water utilities and DOHS to communicate directly has probably increased the level of community concern. This, the group feels, is exacerbated by the Regional Board's procedures, which do not include opportunities for broad-based citizen involvement. Other concerns include the need to identify all actual or potential sources of ground water contamination, to improve interagency coordination so that the process can move along more rapidly, and to monitor private wells.

LEAGUE OF WOMEN VOTERS (LEAGUE)

Organizational Structure

The Bay Area League is composed of 23 separate leagues in five counties. The Santa Clara County league is made up of leagues in Palo Alto, Los Altos/Los Altos Hills/Mountain View, Cupertino/Sunnyvale, Saratoga/Los Gatos, and San Jose/Santa Clara, with a total of about 900 members. The organization has been very active in investigating hazardous materials handling issues.

Community Involvement Activities

The Santa Clara County League completed a 2-year study on hazardous waste issues in 1983. It examined the need for hazardous materials management planning rather than specific ground water contamination issues.

During summer 1984, the Bay Area League received a grant to produce a 2-part television special entitled "Toxic Chemicals: Information is the Best Defense" in cooperation with KTVU. It featured interviews with firefighters, emergency medical personnel, business people, and citizens and included a segment on the development of the Hazardous Materials Disclosure Ordinance in response to ground water contamination problems in Silicon Valley. The special was aired initially in September 1984 and was shown again in January 1985.

The Bay Area League is also sponsoring a series of conferences and workshops on hazardous waste issues in the area. The first two, held in 1984, were geared toward the League's membership and focused on risk assessment and development of the hazardous waste storage ordinance effort. The third workshop, "Dealing with Underground Water Contamination," held in San Jose in February, 1985, was publicized in the community. It included presentations by agency and industry representatives.

Key Concerns

League representatives indicated that South Bay residents are "furious" that the cleanup process should take so long and move so slowly. They feel a central information source (a number to call) is needed to respond adequately to citizen concern and that the Regional Board's processes should be altered to allow for notification of affected "publics." League representatives believe that the liability questions have created stagnation in cleanup efforts because all of the involved parties are afraid to respond. They also feel EPA should move more quickly to set standards for contaminant levels even if they would require alteration at a later time. The League is concerned about the issue of "who pays for cleanup activities" and believes that additional information about the sources of Superfund program monies (industry payments vs. tax dollars) should be made available to the public. The League is represented on the IEMP public advisory committee.

YOUTH SCIENCE INSTITUTE

The Youth Science Institute, a non-profit organization, has been awarded a grant from the State Department of Education's Environmental/Energy Education Grant Program to produce an educational program for sixth graders on the management of hazardous wastes in Santa Clara County. The group is currently consulting with agency staff to develop a more detailed scope for its activities. It may sponsor a conference on toxics-related issues during Spring 1985.

UNIVERSITIES

Representatives from universities in the South Bay are included on IEMP's Public Advisory Committee. The universities have had very little involvement in the ground water contamination issue as institutions, although individual professors have invited agency speakers to address their classes or to participate in conferences. Both Santa Clara Community College and San Jose State University have offered their facilities as sites for community conferences on project-related issues.

STATE AND FEDERAL DELEGATIONS

The South Bay federal delegation includes Congressmen Don Edwards, Norman Mineta, and Ed Zschau. State Senators Alfred Alquist and Dominic Cortese represent the South Bay area. Both delegations have taken an active role in ground water contamination issues since initial discovery of the problem.

Community Involvement Activities

In August 1984, U.S. Representatives Edwards, Mineta, and Zschau jointly requested that EPA include the South Bay as one site on the NPL. This followed in the wake of intense media coverage of the process being used to determine which sites would be recommended for inclusion on the NPL update. This request resulted in a personal response from the EPA administrator indicating why sites within the South Bay would be included separately on the NPL but pledging that EPA would take an areawide approach to South Bay ground water contamination problems.

In September 1984, State Senator Alquist held an oversight hearing in San Jose on toxic waste issues. Testimony focusing on the need for clearer governmental guidelines, greater expenditure of government funds, and increased interagency coordination was reported in local media. Offices of these elected officials have not received a significant number of calls from concerned citizens.

Key Concerns

District representatives identified the need for a reliable source of information on the "big picture," a single source of information for all aspects of project-related activity. They were also very interested in being kept regularly informed about project events.

GENERAL PUBLIC

According to those interviewed, the public's great interest in ground water contamination issues combined with their high level of education has resulted in a proliferation of communication on the subject. Research findings, test results, and other program-related data are routinely presented to the public from a variety of perspectives. Media reporters often draw different conclusions than do editors of occupational safety or environmental organization newsletters. Agency staff, water companies, and/or industry representatives may differ on the proper interpretation of available information, and so on. When so much technical information is available from so many sources with so many points of view, citizens have difficulty making sense of the data or relying on any single source of information.

Those interviewed suggested that key concerns of the general public are drinking water safety and assurance that action is being taken to protect the future safety of the drinking water. Specific concerns relate to:

- The potential health effects from exposure to contaminants

- The extent to which the various aquifers have been contaminated
- The speed and direction of contamination plume movement
- The need to establish standards for drinking water safety
- The need to seal abandoned wells
- The need to consider all contaminant sources including gas leaks and pesticides

It was generally agreed that it is critical to communicate information to the general public concerning:

- What is known (and what is not known) about the magnitude of the ground water contamination problem
- What research is being done to increase understanding of the problem
- The safety of South Bay drinking water

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Section C
COMMUNITY INVOLVEMENT WORK PLAN

COMMUNITY INVOLVEMENT OBJECTIVES

1. Provide the general public with information on ground water systems; water supply sources; measurement of water quality; hazardous waste regulatory processes; and scope, progress and findings of remedial response activities. Include sufficient background information about technical and environmental issues to help the public understand and assess possible remedial actions. Provide all information, especially technical findings, in a form understandable to the general public.

2. Provide the media with timely, detailed information throughout program activities. Use the media as a major means of disseminating information to the general public.

3. Keep appropriate elected officials informed of the scope, progress, and findings of remedial response activities.

4. Continue two-way information exchange with environmental, public interest, and other concerned groups and interested individuals throughout the remedial response program.

5. Coordinate the community involvement efforts of the IEMP and Superfund programs to maximize existing information networks, data, materials, and manpower. The relationship between IEMP and the remedial response project should be defined in community involvement publications and activities.

6. Define specific agency roles in implementation of community involvement activities for the periods before and after finalization of the Multi-Site Cooperative Agreement.

7. Monitor public concerns and information needs throughout the project. Modify the community involvement plan as necessary to respond to changes in community attitudes and needs.

REMEDIAL RESPONSE ACTIVITIES

The community involvement work plan has been developed to meet the community involvement objectives outlined above and to accompany the following remedial response activities:

- Conduct areawide Remedial Investigation/Feasibility Study.

- Conduct (or oversee) site-specific Remedial Investigation/Feasibility Studies.
- Conduct private well inventory and monitoring program.
- Conduct focused feasibility studies on alternative water supply, well sealing, and source removal.
- Complete leak detection program.
- Conduct enforcement actions.
- Implement (or monitor implementation of) remedial measures.

This plan presents an interagency approach to an areawide community involvement program and specifies tasks to be performed by agencies of the South Bay Ground Water Contamination Task Force (South Bay Task Force). The plan incorporates basic community involvement activities needed for all of the South Bay sites. As the program proceeds, however, additional activities may be implemented for specific sites as appropriate. The organizational structure for implementating the plan is described below. Descriptions of the techniques to be used and responsibilities of particular agencies follow.

COMMUNITY INVOLVEMENT ORGANIZATIONAL STRUCTURE

The South Bay Task Force will approve the community involvement plan. At its monthly meetings, the South Bay Task Force will be kept informed of community involvement activities, help identify public concerns and additional public information needs as they arise, and make any necessary decisions about community involvement work. The South Bay Task Force will also assume responsibility for informing the Integraded Environmental Management Project (IEMP) committees about key program activities.

To coordinate implementation of this plan, member agencies of the South Bay Task Force (EPA, DOHS, Regional Board, Water District, Santa Clara County, and the CMA) will each appoint an information officer to an interagency community involvement team. It is suggested that the County representative be an employee of the County Health Department. The purpose of the team will be to provide accurate, consistent, and coordinated responses to requests for information from the community, elected officials, and the media. ICIT members will select a team leader.

The ICIT will meet on an informal basis as often as necessary to report on agency activities, discuss the timing and application of particular community involvement techniques, comment

on drafts of community involvement materials, coordinate participation in community meetings and conferences, submit names for mailing list updates, and review newspaper clips and other media coverage.

COMMUNITY INVOLVEMENT TECHNIQUES AND TASKS

Techniques for meeting community involvement objectives are described below. Each technique is assigned to an agency or group of agencies.

A summary of tasks and agency responsibilities is presented in Table 1. Because remedial response activities are extremely diverse and cannot be assigned common milestones, the application and timing of the particular community involvement techniques during the program will be based on the judgment of the South Bay Task Force and the Interagency Community Involvement Team.

1. MAILING LISTS
(EPA, Regional Board and Water District Responsibility)

EPA Responsibility. EPA has prepared a preliminary areawide mailing list of about 500 interested parties to be used for information dissemination. The list is divided into categories of local, county, state, and federal elected officials and agencies; community organizations; water purveyors; industry representatives; information repositories; media contacts; and individuals. EPA will update it in several ways throughout the program.

EPA will add community organization newsletter contacts to the preliminary mailing list so that organizations will be able to include program-related information in their membership newsletters.

EPA will periodically place mailing list coupons to be clipped out and mailed back in local print media (including the Spanish newspaper). Water purveyors will be encouraged to insert them in water bills periodically throughout the program. These coupons would include name, address, and water company (or private well user). Individuals who return coupons will be added to the areawide mailing list.

EPA will computerize the updated areawide mailing list and code each entry by the following categories:

- Local officials
- County officials
- State officials
- Local agencies

Table 1
AGENCY RESPONSIBILITIES FOR COMMUNITY INVOLVEMENT ACTIVITIES

EPA[a]	Regional Board[b]	Santa Clara Valley Water District[c]	State Department of Health Services	County Health Department	City Managers Association
ICIT[d] participation	ICIT[d] participation	ICIT[d] participation	ICIT[d] participation	ICIT[d] participation	ICIT[d] participation
Areawide mailing list	Site-specific mailing list	Private well owner mailing list	Fact sheet assistance	Information repository	Press releases
Local library repository program	Information repository	Fact sheet assistance	Telephone network	Areawide information contact	Workshops
Newsletter	Site-specific information contact	Telephone network	Press releases	Telephone network	Media briefings
Fact sheets	Site-specific public notification	Press releases	Media briefings	Press releases	Community meetings
Letterhead and cover letter	o Bulk mailings	Media briefings	Coordination of AB 1803 notification	Media briefings	
Telephone network	o Announcements	Private well user information program		Coordination of AB 1803 notification	
Site profile development	o Technical summaries				
Press releases	o Public notices				
Media briefings	o Public comment periods				
Public service announcements	o Hearings				
Community involvement plan revision	Site profile update and distribution				
	Press releases				
	Media briefings				
	Responsiveness summary				

[a] These areawide community involvement activities will be funded by EPA.

[b] These site-specific community involvement activities will be funded by EPA through EPA/state Multi-Site Cooperative Agreement.

[c] These community involvement activities will be funded by EPA through EPA/state Multi-Site Cooperative Agreement.

[d] Interagency Community Involvement Team.

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- o County (and regional) agencies
- o State agencies
- o Community organizations
- o Water purveyors
- o Industry representatives
- o Media contacts
- o Individuals
- o Information repositories

Regional Board Responsibility. The Regional Board will develop and update mailing lists for notifying people interested in particular sites. Site-specific mailing lists will be developed for existing sites from responses to a one-time public notice with a mail-back coupon. Individuals who return the coupon will be placed on the mailing list(s) for the site(s) in which they indicate interest and will receive all subsequent mailings concerning the site(s). Press releases issued by the Regional Board announcing the discovery of new sites will state that interested persons can request that their names be added to the mailing list for that site. People who call the Regional Board for information will also be added to the appropriate list(s). Elected officials, agency staff, community organizations and others from the areawide mailing list can be added to the site-specific lists as appropriate. The site-specific notification procedures are discussed in Task 4.

Water District Responsibility. The Water District will develop and update a mailing list of private well owners and users and water systems with fewer than five connections. The Water District will obtain listings from the County Health Department as appropriate. EPA will supply names from the areawide mailing list that should also be included on this list. It will be used for distribution of the information materials described in technique 16.

2. LOCAL INFORMATION REPOSITORIES
(EPA, Regional Board and County Health Department Responsibility)

EPA Responsibility. Libraries throughout the South Bay area will be used as information repositories for areawide general educational materials such as fact sheets and newsletters. They are included on the preliminary mailing list. Repository locations will be identified in news releases and fact sheets.

EPA will contact proposed repositories to arrange for deposit of areawide information. EPA will also discuss placing a portable graphic display of the South Bay ground water system (or another facet of the areawide

program) in libraries and city/county office buildings. EPA will provide the display and arrange for its rotation in the South Bay. EPA will be responsible for placing areawide materials in repositories.

Regional Board Responsibility. The Regional Board will serve as a repository for all remedial response activity documents as well as areawide educational materials. Throughout the remedial response period, the Regional Board staff will have a complete set of documents available for public review at its office and will forward copies of these materials to the County Health Department.

County Health Department Responsibility. The County Health Department will also maintain a complete set of program-related documents for public review.

3. INFORMATION CONTACTS
(County Health Department and Regional Board Responsibility)

County Health Department Responsibility. The County Health Department will serve as a local information contact. Most of those interviewed thought the County Health Department would be an ideal local information contact because of its San Jose location and its credibility as a reliable information source.

The name and telephone number of County Health Department's representative on the ICIT will be included with areawide educational materials. He or she will respond to requests for information by answering general questions on the areawide program, mailing out materials, and forwarding names for areawide, site-specific and private well mailing lists to EPA, the Regional Board and the Water District. When site-specific information is requested, the caller will be referred to the Regional Board information officer. Callers inquiring about the private well monitoring program will be referred to the Water District.

Regional Board Responsibility. The Regional Board's information officer will be the contact for site-specific information. That person's name and telephone number will appear on site-specific notification announcements and other materials related to site-specific activities. He or she will respond to requests for information on the current status of activities at particular sites. The Regional Board should consider installation of special telephone service that allows South Bay residents to call its office toll-free.

4. SITE-SPECIFIC PUBLIC NOTIFICATION
(Regional Board Responsibility)

The Regional Board information officer will establish a procedure for routine public notification at key milestones in the remedial response process. Table 2 identifies the suggested milestones and notification techniques. This activity will expand the Board's existing hearing notification procedures. Funding for this activity will be provided through an EPA/state Multi-Site Cooperative Agreement.

5. TELEPHONE NETWORK
(ICIT Responsibility)

A telephone network will facilitate the flow of critical program-related information to key elected officials and agency staff so they can provide informed responses to questions from the public. This network would be used in the case of news events likely to be reported by local media before agencies can issue press releases or provide advance written notice to key parties.

6. NEWSLETTER
(EPA Responsibility)

A newsletter will be published (at least quarterly) throughout the remedial response period. It will provide an overview of major activities, upcoming events, cleanup status, enforcement activities, and available reports and publications. It will also include brief discussions of items of general interest. Newsletters will be mailed to the entire areawide mailing list and placed in all of the information repositories.

7. FACT SHEETS
(EPA, Water District, and DOHS Responsibility)

EPA will coordinate preparation of a series of fact sheets to provide information on the following topics:

a. "South Bay Ground water Contamination: An Overview"--including background on ground water contamination in the South Bay and a discussion of the regulatory framework and agency roles in remedial response activities. It will also include a mail-back coupon for requesting copies of the other available fact sheets. Consideration should be given to translating this fact sheet into Spanish.

Table 2
SITE-SPECIFIC NOTIFICATION PROCEDURES

Milestones	Mailing List Development[a]	Announcement[b]	Repository[c]	Technical Summaries[d]	Public Notice/ 30-Day Comment Period/Hearing[e]
Phase I Report (case opened); Initial Remedial Measures approved (if any)	X		X		
Phase II (Site Investigation) completed; Interim Remedial Action Plan submitted		X	X	X	X
Final Remedial Action Plan submitted		X	X	X	X
Final Remedial Action requirements issued		X	X	X	

[a] Site-specific mailing lists will be developed from responses to a one-time public notice in local newspapaers with a mail-back coupon for people who want to be included on the lists. Press releases issued by the Regional Board to announce the discovery of new sites will state that interested persons can have their names included on the mailing list for that site. Persons who call the Regional Board for information will also be added to the appropriate list(s). If appropriate, the Regional Board could coordinate mailings to households and businesses in the vicinity of a site if funding is provided by industry or another source.

[b] Announcements of these milestones will be sent to the site-specific mailing list, media contacts and others from the areawide mailing list as appropriate. Announcements will provide a brief description of measures taken, investigation findings, plan provisions, or waste discharge requirements.

[c] Documents will be placed in the County Health Department and Regional Board information repositories.

[d] Technical summaries of the proposed plans will be included with the announcement mailings. The technical summary of the final requirements will include a response to public comments made at the hearings. All technical summaries will be placed in the local library, County Health Department, and Regional Board repositories.

[e] Public notice of the availability of the document, the comment period, and the Regional Board hearing will be placed in local newspapers. Public testimony will be recorded at the hearing.

b. "The Water Cycle of the Santa Clara Valley"--describing the aquifer system in the valley, ground water vs. surface water, shallow aquifers vs. deep water aquifers, how wells work, and so on.

c. "The Cleanup Process"--describing roles and responsibilities of the agencies involved in remedial response activities, the cleanup process, enforcement activities, and general time frames involved.

d. "Community Involvement: What Role You Can Play in the Cleanup Process"--describing ways of participating, sources of information, types of information available, and so on.

e. "Enforcement Procedures"--describing various enforcement mechanisms and how they are used by specific agencies.

f. "Hazardous Waste Regulatory Framework"--including a discussion of the Cortesi and Sher bills, the local HMMO's and the state Superfund program as well as federal regulations and programs.

g. "South Bay Drinking Water Quality"--describing major contaminants that have been identified, state action levels for these substances, what action levels mean and how they are determined, and the government programs that provide for monitoring water quality.

h. "South Bay Water Suppliers"--including a map of water company service areas and information about water sources, testing procedures, and public notification requirements. Preparation of a separate fact sheet for each major purveyor should be considered.

i. "Information for Private Well Owners"--identifying lack of regulatory protections, potential for well contamination, funding of private well testing, procedures for getting water tested, and options for alternative water supply.

j. "Health Effects of Contaminants"--describing what is known and what is not known about health effects and the difficulties in conducting health studies and tests on chemicals.

EPA will be responsible for writing and producing fact sheets "a" through "i." The Water District will provide assistance in the preparation of fact sheets "g" through

"i." Water District participation in this effort will be funded through the Multi-Site Cooperative Agreement. DOHS will be responsible for preparing a draft of fact sheet "j." It will be reviewed and produced for distribution by EPA.

All fact sheets will identify information contacts and repositories. Copies of fact sheets will be placed in all of the information repositories and distributed to the media, elected officials, and community and industry organizations. Fact sheet "a" (South Bay overview) will be mailed to all individuals on the areawide mailing list. Fact sheet "i" (information for private well owners) will be mailed to individuals on the Water District's mailing list of private well or small water system owners and users. Others will be mailed to individuals on request. It is expected that several fact sheets will be used together to respond to requests for information since the topics are so closely interrelated. Additional fact sheets can be developed to respond to requests for background information on other subjects.

8. TECHNICAL SUMMARIES
(Regional Board Responsibility)

The Regional Board will prepare technical summaries of major program documents as identified in Table 2. Summaries will be distributed to all of the information repositories. Notice of their availability will be included in the newsletter and will be advertised in the San Jose Mercury News and Peninsula Times Tribune. Copies will be sent to individuals requesting them as well as to those on the site-specific mailing list. Funding for this effort will be provided through the Multi-Site Cooperative Agreement.

9. SITE PROFILES
(EPA and Regional Board Responsibility)

EPA will prepare site profiles for each active South Bay site. Profiles are intended to provide a brief description of the site, the extent of known contamination, its effect on drinking water supplies, and its current status. The profile format will match the output of one portion of the computerized site tracking system now being developed by EPA's contractor for use by the Regional Board. Once the site tracking system is "on line," the Regional Board will assume the responsibility of developing profiles for new sites and regularly updating those initially prepared by EPA. Individual site profiles (accompanied by a glossary prepared by EPA) will be sent to those requesting them.

10. PRESS RELEASES
(ICIT Responsibility)

Press releases will be prepared by each agency as appropriate to convey significant program-related information. Fact sheets can be developed to accompany press releases when it is necessary to provide more detailed information. Other ICIT members and affected elected officials will be notified prior to dissemination of press releases. Files of all program-related press releases will be maintained by each ICIT member.

11. MEDIA BRIEFINGS
(ICIT Responsibility)

Briefings for Bay Area media will be held as appropriate to ensure that reporters have sufficient technical background and up-to-date knowledge of key project activities. This task should be coordinated with IEMP press briefings planned prior to release of the Phase I and Phase II reports. Key elected officials will be notified prior to briefings.

12. PUBLIC NOTICE ADVERTISEMENTS
(Regional Board Responsibility)

The Regional Board will place public notice advertisements to supplement other media information techniques. Notices will announce the availability of reports or information, comment periods, and public meetings as identified in Table 2. Other ICIT members and affected officials will be notified prior to placement of an ad.

13. PUBLIC SERVICE ANNOUNCEMENTS
(EPA Responsibility)

EPA will develop a series of public service announcements (PSA) for Bay Area radio and television broadcast. PSA topics will match those of the fact sheets. The announcements will indicate where to call to request copies of fact sheets and other program-related information.

14. WORKSHOPS
(CMA Responsibility)

Working closely with the ICIT, CMA will organize and sponsor a workshop for elected officials and administrators. The workshop is intended to educate these groups about specific aspects of the remedial action program and to discuss new legislation and enforcement activities. The agenda and format should be specifically

geared to information needs and scheduling preferences identified by these groups. If the initial workshop is well attended and well received by participants, additional workshops could be planned. As appropriate, workshops will be co-sponsored by community organizations such as the League of Women Voters.

15. INFORMATION PROGRAM FOR PRIVATE WELL OWNERS
(Water District Responsibility)

As part of its private well sampling and monitoring program, the Water District will work with technical staff to ensure that private well users receive sufficient, understandable information. Field team members will distribute the fact sheet on private wells and a written handout including background information on the program and an explanation of why wells are being sampled. The Water District will also mail followup information about the test findings to the owners (and users) of sampled wells. Well owners and users will automatically be added to the Water District's mailing list and to the areawide mailing list on request. Funding for this activity will be provided through the Multi-Site Cooperative Agreement.

16. COORDINATION OF AB 1803 NOTIFICATION
(DOHS and County Health Department Responsibility)

DOHS and the County Health Department will work with water purveyors to notify water consumers under AB 1803 regulations (for large and small water systems, respectively). They will also coordinate the AB 1803 notification with any related site-specific notification being implemented by the Regional Board.

17. COMMUNITY MEETINGS
(CMA Responsibility)

Working closely with the ICIT, CMA will coordinate a series of community meetings about six months after approval of the final community involvement plan. Meetings will be held in San Jose/Gilroy, Sunnyvale/Mountain View/Palo Alto, and Cupertino/Milpitas/Santa Clara. They will be used to share information on the program as a whole and on sites within the communities as well as to receive comments and respond to questions. Speakers from the responsible agencies will make presentations and respond to questions as appropriate.

The need for additional areawide and local area meetings will be evaluated by the South Bay Task Force and the ICIT throughout the project. In particular, public

meetings will be considered when feasibility studies are complete (to present findings and receive public comment), when contamination affecting drinking water supplies is discovered, or when they are requested by interested parties. Meetings should be sponsored or co-sponsored by U.S. Congressmen, the South Bay Task Force, cities, the League of Women Voters, and other community organizations as appropriate.

18. PUBLIC COMMENT PERIODS
(Regional Board Responsibility)

The Regional Board will provide a minimum 30-day public comment period after release of the areawide feasibility study reports and at particular points in the site-specific cleanup process (identified in Table 2). A 2-week advance notice of the public comment period will be provided. The feasibility study reports (or other documents) will be available at the County Health Department and Regional Board offices. Technical summaries will be available at the local information repositories. Board hearings will be considered as one means of presenting the study findings, discussing the alternatives, responding to questions, and receiving public comment. Regional Board participation in this effort will be funded through an EPA/state Multi-Site Cooperative Agreement.

19. REVIEW AND REVISION OF COMMUNITY INVOLVEMENT PLAN
(EPA Responsibility)

Community concerns and information needs will be monitored throughout the project. The community involvement plan will be reviewed quarterly by the South Bay Task Force, the ICIT, and technical staff and revised as necessary.

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Section D
STAFFING PLAN

This section presents staffing allocation and budget for community involvement plan implementation during a one-year period. Hours are allocated by task for agency and contractor staff time. Estimates include community involvement staff only, not technical staff.

STAFF ALLOCATION

EPA RESPONSIBILITY	Contractor Work Hours	Agency Work Hours
ICIT Participation		
Community Relations Coordinator (CRC)	--	96
Clerical	--	24
Areawide Mailing List		
CRC	24	8
Clerical	3	40
Graphics	4	--
Local Library Repository Program		
CRC	24	6
Clerical	4	16
Graphics	40	--
Newsletter (4)		
CRC	120	16
Clerical	--	16
Graphics	32	--
Fact Sheets (10)		
CRC	160	20
Clerical	--	20
Graphics	40	--
Letterhead and Cover Letter		
CRC	8	2
Graphics	4	--
Telephone Network		
CRC	--	48
Clerical	--	48
Site Profiles		
CRC	100	8

EPA RESPONSIBILITY (Continued)	Contractor Work Hours	Agency Work Hours
Press Releases (4)		
CRC	16	4
Clerical	--	8
Media Briefings (4)		
CRC	--	20
Clerical	--	8
Graphics	8	--
Public Service Announcements (10)		
CRC	24	2
Graphics	8	--
Community Involvement Plan Revision		
CRC	12	4
Total Personnel Hours		
CRC	488	234
Clerical	19	180
Graphics	124	--

REGIONAL BOARD RESPONSIBILITY

It is assumed that implementation of the Regional Board responsibilities will require a full-time information officer with a full-time office assistant and part-time computer technician support.

WATER DISTRICT RESPONSIBILITY

	Contractor Work Hours	Agency Work Hours
ICIT Participation		
Information Officer	--	96
Clerical	--	24
Private Well Mailing List		
Information Officer	--	16
Clerical	--	40
Fact Sheet Assistance		
Information Officer	--	8
Telephone Network		
Information Officer	--	48
Clerical	--	48

WATER DISTRICT RESPONSIBILITY (Continued)

	Contractor Work Hours	Agency Work Hours
Press Releases (4)		
Information Officer	--	16
Clerical	--	8
Media Briefings (4)		
Information Officer	--	20
Clerical	--	8
Graphics	--	8
Private Well Information Program		
Information Officer	--	120
Clerical	--	40
Total Personnel Hours		
Information Officer	--	316
Clerical	--	168
Graphics	--	8

DOHS RESPONSIBILITY

ICIT Participation		
Information Officer	--	96
Clerical	--	24
Fact Sheet Assistance		
Information Officer	--	8
Clerical	--	2
Telephone Network		
Information Officer	--	48
Clerical	--	48
Press Releases (4)		
Information Officer	--	16
Clerical	--	8
Media Briefings (4)		
Information Officer	--	20
Clerical	--	8
Graphics	--	8
Coordination of AB 1803 Notification		
Information Officer	--	56
Clerical	--	12
Total Personnel Hours		
Information Officer	--	244
Clerical	--	102
Graphics	--	8

COUNTY HEALTH DEPARTMENT RESPONSIBILITY

It is assumed that implementation of the County Health Department responsibilities will require a three-quarter-time information officer.

CMA RESPONSIBILITY

	Contractor Work Hours	Agency Work Hours
ICIT Responsibility		
Information Officer	--	96
Clerical	--	24
Press Releases (4)		
Information Officer	--	16
Clerical	--	8
Media Briefings (4)		
Information Officer	--	20
Clerical	--	8
Graphics	--	8
Workshop		
Information Officer	--	80
Clerical	--	16
Graphics	--	16
Community Meetings (3)		
Information Officer	--	72
Clerical	--	24
Graphics	--	24
Total Personnel Hours		
Information Officer	--	284
Clerical	--	80
Graphics	--	48

BUDGET

The following budget summarizes costs of contractor staffing allocations shown above. It is based on average hourly rates of $50 for community relations coordinators, $22 for clerical staff, and $30 for graphics staff. Agency labor costs are not budgeted for EPA, the Water District, DOHS, the County Health Department, or CMA because it is assumed that existing staff will assume the identified responsibilities. Labor costs are included for the Regional Board because it is assumed that new staff (or contractor) will be hired. Contractor and agency expenses for major items such as word processing, printing, postage, and public notice advertisements are identified. Labor costs and expenses are summarized by task below.

EPA RESPONSIBILITY

	Contractor Labor	Contractor Expense	Agency Expense[a]	Combined Cost
ICIT Participation	--	--	$ 750	$ 750
Areawide Mailing List	1,400	700	4,200	6,300
Local Library Repository Program	2,500	100	250	2,850
Newsletter	7,000	1,760	500	9,260
Fact Sheets	12,400	4,300	200	13,700
Letterhead and Cover Letter	525	4,000	--	4,525
Telephone Network	--	--	100	100
Site Profiles	5,000	500	--	5,500
Press Releases	800	50	50	900
Media Briefings	240	--	100	340
Public Service Announcements	1,450	150	--	1,600
Community Involvement Plan Revisions	600	500	--	1,100
Total	31,915	12,060	6,150	50,125

REGIONAL BOARD RESPONSIBILITY

Information Officer/ Office Assistant/ Computer Tech	--	--	$ 98,500	$ 98,500
ICIT Participation	--	--	100	100
Site-Specific Mailing List	--	--	250	250
Information Repository	--	--	500	500
Site-Specific Information Contact	--	--	300	300
Mailing List Development	--	--	4,200	4,200
Announcements	--	--	8,600	8,600
Technical Summaries	--	--	8,250	8,250
Public Notices	--	--	22,650	22,650
Hearings	--	--	750	750
Site Profiles	--	--	4,250	4,250
Press Releases	--	--	50	50
Media Briefings	--	--	100	100
Total			148,500	148,500

WATER DISTRICT RESPONSIBILITY

ICIT Participation	--	--	100	100
Private Well Mailing List	--	--	50	50
Fact Sheet Assistance	--	--	25	25
Telephone Network	--	--	100	100

[a] Agency expense does not include labor costs for EPA, the Water District DOHS, County Health Department or CMA. It is assumed that tasks will be performed by existing employees.

	Contractor		Agency[a]	Combined
	Labor	Expense	Expense	Cost
WATER DISTRICT RESPONSIBILITY (continued)				
Press Releases	--	--	50	50
Media Briefings	--	--	100	100
Private Well User Information Program	--	--	7,600	7,600
Total			8,025	8,025
DOHS RESPONSIBILITY				
ICIT Participation	--	--	100	100
Fact Sheet Assistance	--	--	25	25
Telephone Network	--	--	100	100
Press Releases	--	--	50	50
Media Briefings	--	--	100	100
Coordination of AB 1803 Notification	--	--	100	100
Total			475	475
COUNTY HEALTH DEPARTMENT RESPONSIBILITY				
ICIT Participation	--	--	100	100
Information Repository	--	--	50	50
Areawide Information Contact	--	--	1,000	1,000
Telephone Network	--	--	100	100
Press Releases	--	--	50	50
Media Briefings	--	--	100	100
Coordination of AB 1803 Notification	--	--	100	100
Total			1,500	1,500
CMA RESPONSIBILITY				
ICIT Participation	--	--	100	100
Press Releases	--	--	50	50
Workshop	--	--	325	325
Community Meetings	--	--	1,000	1,000
Total			1,475	1,475

[a]Agency expense does not include labor costs for EPA, the Water District DOHS, County Health Department or CMA. It is assumed that tasks will be performed by existing employees.

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